# HP LaserJet M3027/M3035 MFP
## Service Manual

invent

# HP LaserJet M3027/M3035 MFP
## Service Manual

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# 1 Product Information

## Chapter contents


- Device configurations
- Features
- Walkaround
- Device software
- Media specifications

# Device configurations

| HP LaserJet M3027 | HP LaserJet M3027x | HP LaserJet M3035 | HP LaserJet M3035xs |
|---|---|---|---|
| • Prints up to 27 pages-per-minute (ppm) on letter-sized media, and up to 25 ppm on A4–sized media<br>• 256 megabytes (MB) total of random access memory (RAM), upgradable up to 512 MB<br>• Internal 40 gigabyte (GB) or larger hard disk<br>• 100-sheet multipurpose tray (tray 1), 500-sheet input tray (tray 2), 50-sheet automatic document feeder (ADF), and 250-sheet output bin<br>• Hi-Speed universal serial bus (USB) 2.0 port and enhanced input/output (EIO) slot<br>• HP Jetdirect embedded print server for Ethernet 10/100Base-T network<br>• One open dual inline memory module (DIMM) slot<br>• Digital Send Lite | HP LaserJet M3027, plus:<br>• Automatic two-sided printing accessory<br>• 33.6 kpbs analog fax | • Prints up to 35 ppm on letter-sized media, and up to 33 ppm on A4–sized media<br>• 256 MB total RAM, upgradable up to 512 MB<br>• Internal 40 GB or larger hard disk<br>• 100-sheet tray 1, 500-sheet tray 2, 50-sheet ADF, and 250-sheet output bin<br>• Hi-Speed USB 2.0 port and EIO slot<br>• HP Jetdirect embedded print server for Ethernet 10/100Base-T network<br>• One open DIMM slot<br>• Automatic two-sided printing accessory<br>• Digital Send 4.0 | HP LaserJet M3035, plus:<br>• 33.6 kpbs analog fax<br>• 20-sheet convenience stapler<br>• 500-sheet input tray (tray 3) |

# Features

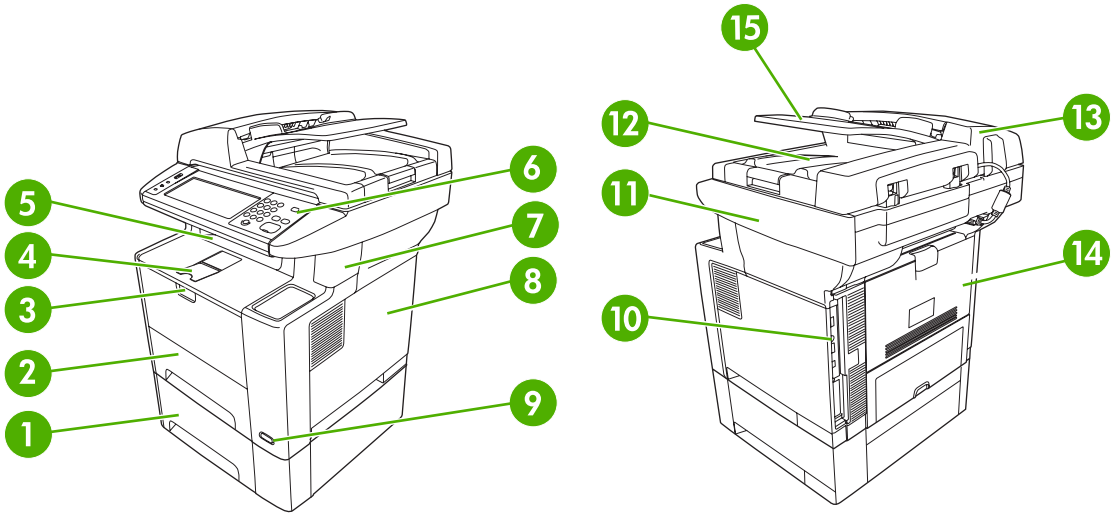
| Feature | Description |
|---|---|
| **Performance** | • 400 MHz processor |
| **User interface** | • Control-panel help<br>• Windows® and Macintosh printer drivers<br>• Embedded Web server to gain access to support and to order supplies (administrator tool for network-connected models only)<br>• HP Easy Printer Care software (a Web-based status and troubleshooting tool) |
| **Printer drivers** | • HP PCL 5<br>• HP PCL 6<br>• HP postscript level 3 emulation |
| **Resolution** | • FastRes 1200—produces 1200-dots-per-inch (dpi) print quality for fast, high-quality printing of business text and graphics<br>• ProRes 1200—produces 1200-dpi printing for the best quality in line art and graphic images |
| **Storage features** | • Internal 40 GB or larger hard drive<br>• Fonts, forms, and other macros<br>• Job retention |
| **Fonts** | • 93 internal fonts available for PCL<br>• 80 printer-matching screen fonts in TrueType format available with the software solution<br>• Additional fonts can be added. |
| **Accessories** | • Optional 500-sheet input tray (tray 3) (standard on the HP LaserJet M3035xs MFP)<br>• 100-pin 133 MHz dual inline memory modules (DIMMs) |
| **Connectivity** | • Hi-Speed USB 2.0 connection<br>• HP Jetdirect full-featured embedded print server<br>• HP Web Jetadmin software<br>• Enhanced input/output (EIO) slot<br>• Foreign interface harness (FIH) port for attaching optional third-party paper-handling devices |
| **Environmental features** | • Sleep mode setting<br>• ENERGY STAR® qualified |
| **Supplies** | • The supplies status page contains information about toner level, page count, and estimated pages remaining.<br>• The product checks for an authentic HP print cartridge at cartridge installation.<br>• Internet-enabled supply-ordering capabilities (using HP Easy Printer Care software) |
| **Accessibility** | • The online user guide is compatible with text screen-readers.<br>• The print cartridge can be installed and removed by using one hand. |

| Feature | Description |
| --- | --- |
| | • All doors and covers can be opened by using one hand.<br>• Media can be loaded in tray 1 by using one hand. |

# Walkaround

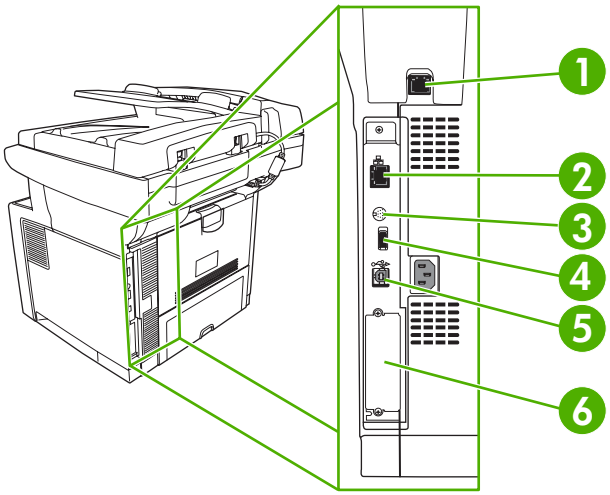
## Device parts

Before using the product, familiarize yourself with its components.




| | |
|---|---|
| 1 | Optional tray 3 |
| 2 | Tray 2 |
| 3 | Tray 1 (pull to open) |
| 4 | Latch to open the front door (provides access to the print cartridge) |
| 5 | Top output bin |
| 6 | Control panel |
| 7 | Convenience stapler (standard on the HP LaserJet M3035xs MFP) |
| 8 | Right-side cover (provides access to DIMMs) |
| 9 | On/off switch |
| 10 | Interface ports (see Interface ports on page 6) |
| 11 | Scanner assembly |
| 12 | ADF output bin |
| 13 | Automatic document feeder (ADF) |
| 14 | Rear output bin (pull to open) |
| 15 | ADF input tray |

## Interface ports




| | |
|---|---|
| 1 | Fax port (HP LaserJet M3027x and HP LaserJet M3035xs only) |
| 2 | Network connection |
| 3 | Foreign interface harness (FIH) port |
| 4 | Type A Hi-Speed USB 2.0 connection for adding accessories |
| 5 | Type B Hi-Speed USB 2.0 connection for printing |
| 6 | EIO slot |

# Device software

The printing-system software is included with the device. See the getting started guide for installation instructions.

The printing system includes software for end users and network administrators, and printer drivers for access to the device features and communication with the computer.

**NOTE:** For a list of printer drivers and updated HP printer software, go to www.hp.com/go/LJM3027mfp_software or www.hp.com/go/LJM3035mfp_software.

## Supported operating systems

The device supports the following operating systems:

### Full software installation

- Windows XP (32-bit and 64-bit)
- Windows Server 2003 (32-bit and 64-bit)
- Windows 2000
- Mac OS X V10.2.8, V10.3, V10.4 and later

### Printer driver only

- Linux (Web only)
- UNIX model scripts (Web only)

**NOTE:** For Mac OS V10.4 and later, PPC and Intel Core Processor Macs are supported.

## Minimum system requirements

In order to install and use the device software, your computer must meet the following minimum requirements:

### Windows requirements

- Pentium II (233 MHz) processor
- 64 MB of RAM
- 35 MB of disk space
- SVGA 800x600 16-bit color monitor

### Macintosh requirements

- G3, G4, or G5 PowerPC processor
- 128 MB of RAM
- 30 to 50 MB of disk space

## Supported printer drivers

| Operating system[1] | PCL 5 | PCL 6 | PS level 3 emulation |
|---|---|---|---|
| Windows[2,3] | ✔ | ✔ | ✔ |

| Operating system[1] | PCL 5 | PCL 6 | PS level 3 emulation |
|---|---|---|---|
| Mac OS X V10.2 and later | | | ✔ |
| Linux[4] | | | ✔ |

1 Not all device features are available from all drivers or operating systems.

2 For Windows 2000 and Windows XP (32-bit and 64-bit), download the PCL 5 driver from www.hp.com/go/LJM3027mfp_software or www.hp.com/go/LJM3035mfp_software.

3 For Windows XP (64-bit), download the PCL 6 driver from www.hp.com/go/LJM3027mfp_software or www.hp.com/go/LJM3035mfp_software.

4 For Linux, download the postscript level 3 emulation driver from www.hp.com/go/linuxprinting.

The printer drivers include online Help that has instructions for common printing tasks and also describes the buttons, checkboxes, and drop-down lists that are in the printer driver.

## Select the correct printer driver

Printer drivers allow you to gain access to the device features and allow the computer to communicate with the device (using a printer language). Check the installation notes and readme files on the device CD for additional software and languages.

The device uses the PCL 5, PCL 6, and HP postscript level 3 emulation printer description language (PDL) drivers.

- Use the PCL 6 printer driver for the best overall performance.
- Use the PCL 5 printer driver for general office printing.
- Use the HP postscript level 3 emulation driver for printing from postscript level 3 emulation needs, or for postscript flash font support.

### Universal printer drivers

The HP Universal Print Driver Series for Windows includes separate HP postscript level 3 emulation and HP PCL 5 versions of a single driver that provides access to almost any HP device while providing system administrator with tools to manage devices more effectively. The Universal Print Driver is included on the device CD, under the Optional Software section. For more information, go to www.hp.com/go/universalprintdriver.

### Driver Autoconfiguration

The HP LaserJet PCL 5, PCL 6, and PS level 3 emulation drivers for Windows 2000 and Windows XP feature automatic discovery and driver configuration for device accessories at the time of installation. Some accessories that the Driver Autoconfiguration supports are the duplexing unit, optional paper trays, and dual inline memory modules (DIMMs).

### Update Now

If you have modified the device configuration since installation, the driver can be automatically updated with the new configuration. In the **Properties** dialog box (see Open the printer drivers on page 11), on the **Device Settings** tab, click the **Update Now** button to update the driver.

### HP Driver Preconfiguration

HP Driver Preconfiguration is a software architecture and set of tools that you can use to customize and distribute HP software in managed corporate printing environments. Using HP Driver Preconfiguration, information technology (IT) administrators can preconfigure the printing and default settings for HP printer drivers before installing the drivers in the network environment. For more information, see the *HP Driver Preconfiguration Support Guide*, which is available at www.hp.com/go/hpdpc_sw.

## Priority for print settings

Changes to print settings are prioritized depending on where the changes are made:

**NOTE:** The names of commands and dialog boxes might vary depending on your software program.

- **Page Setup dialog box**: Click **Page Setup** or a similar command on the **File** menu of the program you are working in to open this dialog box. Settings changed here override settings changed anywhere else.
- **Print dialog box**: Click **Print**, **Print Setup**, or a similar command on the **File** menu of the program you are working in to open this dialog box. Settings changed in the **Print** dialog box have a lower priority and do *not* override changes made in the **Page Setup** dialog box.
- **Printer Properties dialog box (printer driver)**: Click **Properties** in the **Print** dialog box to open the printer driver. Settings changed in the **Printer Properties** dialog box do not override settings anywhere else in the printing software.
- **Default printer driver settings**: The default printer driver settings determine the settings used in all print jobs, *unless* settings are changed in the **Page Setup**, **Print**, or **Printer Properties** dialog boxes.
- **Printer control panel settings**: Settings changed at the printer control panel have a lower priority than changes made anywhere else.

## Open the printer drivers

| Operating System | To change the settings for all print jobs until the software program is closed | To change the default settings for all print jobs | To change the device configuration settings |
|---|---|---|---|
| Windows 2000, XP, and Server 2003 | 1. On the **File** menu in the software program, click **Print**.<br>2. Select the driver, and then click **Properties** or **Preferences**.<br>The steps can vary; this procedure is most common. | 1. Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**.<br>2. Right-click the driver icon, and then select **Printing Preferences**. | 1. Click **Start**, click **Settings**, and then click **Printers** or **Printers and Faxes**.<br>2. Right-click the driver icon, and then select **Properties**.<br>3. Click the **Device Settings** tab. |
| Mac OS X V10.2.8, V10.3, V10.4 and later | 1. On the **File** menu, click **Print**.<br>2. Change the settings that you want on the various pop-up menus. | 1. On the **File** menu, click **Print**.<br>2. Change the settings that you want on the various pop-up menus.<br>3. On the **Presets** pop-up menu, click **Save as** and type a name for the preset.<br>These settings are saved in the **Presets** menu. To use the new settings, you must select the saved preset option every time you open a program and print. | 1. In the Finder, on the **Go** menu, click **Applications**.<br>2. Open **Utilities**, and then open **Print Center** (OS X V10.2.8) or **Printer Setup Utility**.<br>3. Click on the print queue.<br>4. On the **Printers** menu, click **Show Info**.<br>5. Click the **Installable Options** menu.<br>**NOTE:** Configuration settings might not be available in Classic mode. |

## Software for Macintosh computers

The HP installer provides PostScript® Printer Description (PPD) files, Printer Dialog Extensions (PDEs), and the HP Printer Utility for use with Macintosh computers.

For network connections, use the embedded Web server (EWS) to configure the device. See Embedded Web server on page 13.

The printing system software includes the following components:

- **PostScript Printer Description (PPD) files**

  The PPDs, in combination with the Apple PostScript printer drivers, provide access to device features. Use the Apple PostScript printer driver that comes with the computer.

- **HP Printer Utility**

  Use the HP Printer Utility to set up device features that are not available in the printer driver:

  - Name the device.
  - Assign the device to a zone on the network.
  - Assign an internet protocol (IP) address to the device.
  - Download files and fonts.
  - Configure the device for IP or AppleTalk printing.

  You can use the HP Printer Utility when your device uses a universal serial bus (USB) cable or is connected to a TCP/IP-based network. For more information, see Use the HP Printer Utility for Macintosh on page 56.

## Remove software from Macintosh operating systems

To remove the software from a Macintosh computer, drag the PPD files to the trash can.

## Utilities

The device is equipped with several utilities that make it easy to monitor and manage the device on a network.

### HP Web Jetadmin

HP Web Jetadmin is a browser-based management tool for HP Jetdirect-connected printers within your intranet, and it should be be installed only on the network administrator's computer.

To download a current version of HP Web Jetadmin and for the latest list of supported host systems, visit www.hp.com/go/webjetadmin.

When installed on a host server, any client can gain access to HP Web Jetadmin by using a supported Web browser (such as Microsoft® Internet Explorer 4.x or Netscape Navigator 4.x or later) by navigating to the HP Web Jetadmin host.

### Embedded Web server

The device is equipped with an embedded Web server, which provides access to information about device and network activities. This information appears in a Web browser, such as Microsoft Internet Explorer or Netscape Navigator.

The embedded Web server resides on the device. It is not loaded on a network server.

The embedded Web server provides an interface to the device that anyone who has a network-connected computer and a standard Web browser can use. No special software is installed or configured, but you must have a supported Web browser on your computer. To gain access to the embedded Web server, type the IP address for the device in the address line of the browser. (To find the IP address, print a configuration page. For more information about printing a configuration page, see Use information pages on page 49.)

For a complete explanation of the features and functionality of the embedded Web server, see Use the embedded Web server on page 53.

## HP Easy Printer Care software

The HP Easy Printer Care software is a program that you can use for the following tasks:

- Discovering printers on the network and checking the status of each device
- Setting and viewing device and supplies alerts for multiple printers at the same time
- Shopping online for supplies
- Using HP online troubleshooting and maintenance tools

You can use the HP Easy Printer Care software when the device is directly connected to your computer or when it is connected to a network. To download the HP Easy Printer Care software, go to www.hp.com/go/easyprintercare.

### Supported operating systems

For information about supported operating systems, go to www.hp.com/go/easyprintercare.

### Supported browsers

To use the HP Easy Printer Care software, you must have one of the following browsers:

- Microsoft Internet Explorer 5.5 or later
- Netscape Navigator 7.0 or later
- Opera Software ASA Opera 6.05 or later

All pages can be printed from the browser.

## Other components and utilities

| Windows | Macintosh OS |
| --- | --- |
| • Software installer — automates the printing system installation<br>• Online Web registration | • PostScript Printer Description files (PPDs) — use with the Apple PostScript drivers that come with the Mac OS<br>• The HP Printer Utility — change device settings, view status, and set up printer-event notification from a Mac. This utility is supported for Mac OS X V10.2.8, V10.3, V10.4 and later. |

# Media specifications

The device accepts a variety of media, such as cut-sheet paper, including up to 100% recycled fiber content paper; envelopes; labels; transparencies; and custom-size paper. Properties such as weight, composition, grain, and moisture content are important factors that affect device performance and output quality. Media that does not meet the guidelines that are outlined in this manual can cause the following problems:

- Poor print quality
- Increased jams
- Premature wear on the device, requiring repair

**NOTE:** Some media might meet all of media specifications and still not produce satisfactory results. Improper handling, unacceptable temperature and humidity levels, and other variables over which Hewlett-Packard has no control can affect print quality. Before purchasing large quantities of media, make sure that it meets the requirements that are specified in the user guide and in the *HP LaserJet Printer Family Print Media Guide*, which is available for download at http://www.hp.com/support/ljpaperguide. Always test paper before buying large quantities.

**CAUTION:** Using media that does not meet HP specifications can cause problems for the device, requiring repair. This repair is not covered by the HP warranty or service agreements.

## General guidelines for media

Before purchasing any paper or specialized forms in quantity, verify that your paper supplier has obtained and understands the print-media requirements that are specified in the *HP LaserJet Printer Family Print Media Guide*.

See HP Customer Care on page 356 to order the *HP LaserJet Printer Family Print Media Guide*. To download a copy of the guide, go to www.hp.com/support/ljpaperguide.

It is possible that paper could meet all of the guidelines in this chapter or the *HP LaserJet Printer Family Print Media Guide* and still not print satisfactorily. This can result from abnormal characteristics of the printing environment or other variables over which HP has no control (for example, extremes in temperature and humidity).

*Hewlett-Packard Company recommends testing any paper before buying it in large quantities.*

**CAUTION:** Using paper that does not conform to the specifications listed here or in the print media guide can cause problems that require service. This service is not covered by the Hewlett-Packard warranty or service agreements.

## Paper to avoid

The product can handle many types of paper. Using paper that does not meet specifications will cause lower print quality and increase the chance of jams.

- Do not use paper that is too rough. Use paper with a tested smoothness rating of 100–250 Sheffield.
- Do not use paper, other than standard 3-hole punched paper, that contains cutouts or perforations.
- Do not use multipart forms.
- Do not use paper that has already been printed on, or that has been fed through a photocopier.
- Do not use paper that contains a watermark if you are printing solid patterns.
- Do not use heavily embossed or raised-letterhead papers.
- Do not use papers that have heavily textured surfaces.
- Do not use offset powders or other materials that prevent printed forms from sticking together.
- Do not use paper that has a colored coating that was added after the paper was produced.

## Paper that can damage the device

In rare circumstances, paper can damage the device. The following paper must be avoided to prevent possible damage to the device:

- Do not use paper with staples attached.
- Do not use transparencies, labels, or photo or glossy paper designed for Inkjet printers or other low temperature printers. Use only media that is specified for use with HP LaserJet printers.
- Do not use any media that produces hazardous emissions, or that melts, offsets, or discolors when exposed to the temperature of the fuser.
- Do not use paper that is embossed or coated, or any media that is not designed to withstand the fusing temperature of the device. Do not use letterhead paper or preprinted forms that are made with dyes or inks that cannot withstand the heat of the fuser.

To order HP LaserJet printing supplies, see Order parts, accessories, and supplies on page 344.

## General media specifications

For complete paper specifications for all HP LaserJet devices, see the *HP LaserJet Printer Family Print Media Guide* (available at www.hp.com/support/ljpaperguide) .

| Category | Specifications |
|---|---|
| Acid content | 5.5 pH to 8.0 pH |
| Caliper | 0.094 to 0.18 mm (3.0 to 7.0 mils) |
| Curl in ream | Flat within 5 mm (0.02 in) |
| Cut edge conditions | Cut with sharp blades with no visible fray. |
| Fusing compatibility | Must not scorch, melt, offset, or release hazardous emissions when heated to 200° C (392°F) for 0.1 second. |
| Grain | Long grain |
| Moisture content | 4% to 6% by weight |
| Smoothness | 100 to 250 Sheffield |

# Select print media

This device accepts a variety of media, such as cut-sheet paper, including up to 100% recycled fiber content paper; envelopes; labels; transparencies; and custom-size paper. Properties such as weight, composition, grain, and moisture content are important factors that affect device performance and output quality. Paper that does not meet the guidelines that are outlined in this manual can cause the following problems:

- Poor print quality
- Increased jams
- Premature wear on the device, requiring repair

**NOTE:** Some paper might meet all of the guidelines in this manual and still not produce satisfactory results. This might be the result of improper handling, unacceptable temperature and humidity levels, or other variables over which Hewlett-Packard has no control. Before purchasing large quantities of media, make sure that it meets the requirements that are specified in this user guide and in the *HP LaserJet Printer Family Print Media Guide*, which is available for download at www.hp.com/support/ljpaperguide. Always test paper before buying large quantities.

**CAUTION:** Using media that does not meet HP specifications can cause problems for the device, requiring repair. This repair is not covered by the HP warranty or service agreements.

## Supported media sizes

**Table 1-1 Supported media sizes**

| Tray | Letter[2] | Legal | A4[2] | A5 | Executive (JIS) | B5 (JIS) | 16K | Custom | Statement | S Postcard (JIS) | Envelope[1] | 216 x 330 mm (8.5 x 13 in) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tray 1 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Tray 2, tray 3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | | | | ✓ |
| ADF input tray | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | ✓ | | | ✓ |

[1] Supported envelope sizes are #10, Monarch, C5, DL, and B5.

[2] When feeding media from the ADF, the default paper size is Letter or A4 depending on locale. To copy any other supported paper sizes, specify the size of the original using the control panel.

**Table 1-2 Automatic 2-sided printing [1]**

| Media size | Dimensions | Weight and thickness |
|---|---|---|
| Letter | 216 x 279 mm (8.5 x 11 in) | 60 to 120 g/m$^2$ (16 to 32 lb bond) |
| Legal | 216 x 356 mm (8.5 x 14 in) | |
| A4 | 211 x 297 mm (8.3 x 11.7 in) | |
| 216 x 330 mm (8.5 x 13 in) | 216 x 330 mm (8.5 x 13 in) | |

[1] Automatic 2-sided printing on weights heavier than those shown can produce unexpected results.

**NOTE:** Automatic 2-sided (duplex) printing is only available with the HP LaserJet M3027x, HP LaserJet M3035, and HP LaserJet M3035xs models.

**NOTE:** **Automatic 2-sided copying from the ADF:** All supported media sizes can be fed from the ADF in duplex mode, but only the media sizes supported for duplex printing can be automatically printed on both sides.

**NOTE:** **Manual 2-sided printing:** Most of the supported media sizes and types listed for printing from tray 1 can be manually duplexed. See the user guide for more information.

## Supported media types

**Table 1-3 Tray 1 media types**

| Type | Dimensions | Weight or thickness | Capacity[1] |
|---|---|---|---|
| Plain | Minimum: 76 x 127 mm (3 x 5 in)<br><br>Maximum: 216 x 356 mm (8.5 x 14 in) | 60 to 199 g/m$^2$ (16 to 53 lb) | 100 sheets |
| Preprinted | | 60 to 120 g/m$^2$ (16 to 32 lb) | 100 sheets |
| Letterhead | | 60 to 120 g/m$^2$ (16 to 32 lb) | 100 sheets |
| Prepunched | | 60 to 120 g/m$^2$ (16 to 32 lb) | 100 sheets |
| Bond | | 60 to 120 g/m$^2$ (16 to 32 lb bond) | 100 sheets |
| Recycled | | 60 to 120 g/m$^2$ (16 to 32 lb) | 100 sheets |
| Colored paper | | 60 to 120 g/m$^2$ (16 to 32 lb) | 100 sheets |
| Rough | | 60 to 199 g/m$^2$ (16 to 53 lb) | Up to 100 sheets |
| Light | | 60 to 75 g/m$^2$ (16 to 20 lb) | 100 sheets |
| Custom | | 60 to 199 g/m$^2$ (16 to 53 lb) | Up to 100 sheets |
| Transparencies[2] | | 0.10 to 0.14 mm thick (4.7 to 5 mils thick) | Up to 60 sheets |
| Envelopes | | 75 to 90 g/m$^2$ (20 to 24 lb) | 10 envelopes |
| Labels | | 0.10 to 0.14 mm thick (4.7 to 5 mils thick) | Up to 60 sheets |
| Cardstock | | Greater than 163 g/m$^2$ (greater than 43 lb) | Up to 100 sheets |

1 Capacity can vary depending on media weight and thickness and environmental conditions. Smoothness should be 100 to 250 (Sheffield). For ordering information, see Supplies and accessories on page 343.

2 Use only transparencies that are designed for use with HP LaserJet printers. This printer can detect transparencies that were not designed for use with HP LaserJet printers. For more information, see the user guide.

**Table 1-4 Tray 2 and tray 3 media types**

| Type | Dimensions | Weight or thickness | Capacity |
|---|---|---|---|
| Plain | Minimum: 140 x 216 mm (5.5 x 8.5 in)<br><br>Maximum: 216 x 356 mm (8.5 x 14 in) | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |
| Preprinted | | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |
| Letterhead | | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |
| Prepunched | | 60 to 120 g/m$^2$ (16 to 32 lb bond) | Up to 500 sheets |
| Bond | | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |
| Recycled | | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |
| Colored paper | | 60 to 120 g/m$^2$ (16 to 32 lb) | Up to 500 sheets |

**Table 1-5 ADF input tray media types**

| Type | Dimensions | Weight or thickness | Capacity |
|---|---|---|---|
| Plain | Minimum width: 147 x 210 mm (5.8 x 8.3 in)<br>Maximum length: 216 x 356 mm (8.5 x 14 in) | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Preprinted | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Letterhead | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Prepunched | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Bond | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Recycled | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |
| Colored paper | | 60 to 105 g/m$^2$ (16 to 28 lb) | Up to 50 sheets |

**NOTE:** Envelopes are not supported in the ADF input tray.

**NOTE:** For media that is dog-eared, three-hole, trifold, or bifold, or for media that has excessive curl (H>10mm) or has had staples removed, use the flatbed scanner instead of the document feeder.

# 2 Installation and configuration

## Chapter contents


- Site preparation
- Install trays
- Install supplies
- Install accessories

# Site preparation

## Box dimensions and weight

| Model | Height | Depth | Width | Weight |
|---|---|---|---|---|
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP | 660 mm (26 inches) | 640 mm (25.2 inches) | 600 mm (23.6 inches) | 32 kg (70.4 lb) |
| HP LaserJet M3035xs MFP | 940 mm (37.01 inches) | 640 mm (25.2 inches) | 600 mm (23.6 inches) | 40.65 kg (89.4 lb) |
| 500-sheet optional paper feeder | 520 mm (65.28 inches) | 498 mm (19.61 inches) | 298 mm (11.74 inches) | 6.31 kg (13.8 lb) |

## Product dimensions and weight

Values provided are maximums. Actual values vary depending on product configuration.

| Model | Height | Depth | Width | Weight |
|---|---|---|---|---|
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP with legal-size scanner and ADF | 550 mm (21.6 inches) | 510 mm (20.1 inches) | 525 mm (20.7 inches) | 28.8 kg (63.5 lb) |
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP with letter/A4-size scanner and ADF | 530 mm (20.9 inches) | 485 mm (19.1 inches) | 464 mm (18.3 inches) | 27.6 kg (60.6 lb) |
| HP LaserJet M3035xs MFP with legal-size scanner and ADF | 688 mm (27.1 inches) | 510 mm (20.1 inches) | 525 mm (20.7 inches) | 34.6 kg (76.4 lb) |
| HP LaserJet M3035xs MFP with letter/A4-size scanner and ADF | 670 mm (26.4 inches) | 485 mm (19.1 inches) | 464 mm (18.3 inches) | 33.4 kg (73.5 lb) |

## Serviceability space requirements

Ensure that the MFP is installed in an area with enough space around the MFP for proper service access and ventilation. Values provided are maximums. Actual values will vary depending on the product configuration.

| Model | Height | Depth | Width |
|---|---|---|---|
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP | 870 mm (34.3 inches) | 978 mm (38.4 inches) | 634 mm (25 inches) |
| HP LaserJet M3035xs MFP | 1010 mm (39.8 inches) | 978 mm (38.4 inches) | 634 mm (25 inches) |

## Operating environment

| Environmental condition | Recommended | Allowed |
|---|---|---|
| Temperature (device and print cartridge) | 17.5° to 25.0°C (63° to 77°F) | 0° to 40°C (32° to 104°F) |
| Relative humidity | 30% to 70% (non-condensing) | 0% to 95% |

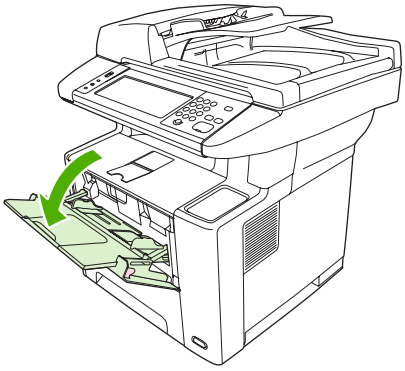
**NOTE:** Optimum performance of the device is assured under the recommended temperature and humidity specifications. Print quality might deteriorate and occurrences of paper jams might increase when the device is operated within the allowed temperature and humidity specifications.

# Install trays

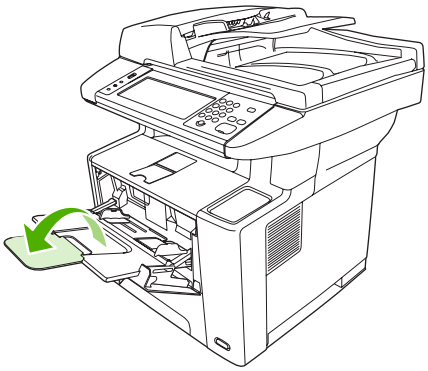
## Load tray 1 (multipurpose tray)

Tray 1 holds up to 100 sheets of paper, up to 75 transparencies, up to 50 sheets of labels, or up to 10 envelopes. For information about loading special media, see the user guide.

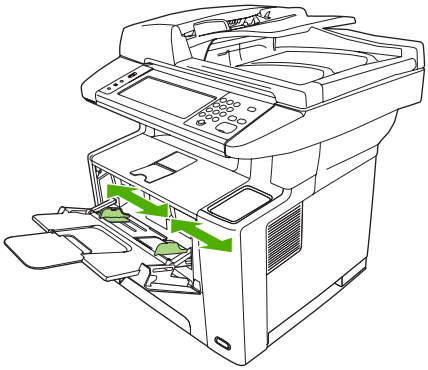
1. Open tray 1 by pulling the front cover down.



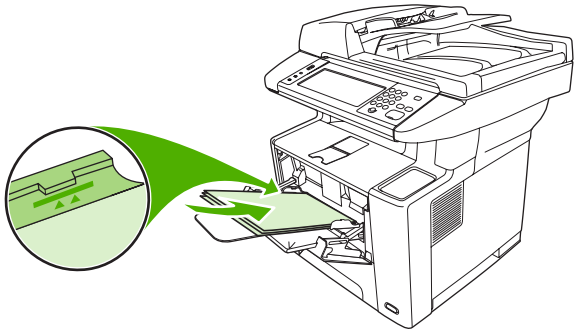
2. Slide out the plastic tray extender. If the media that is being loaded is longer than 229 mm (9 in), also flip open the additional tray extender.



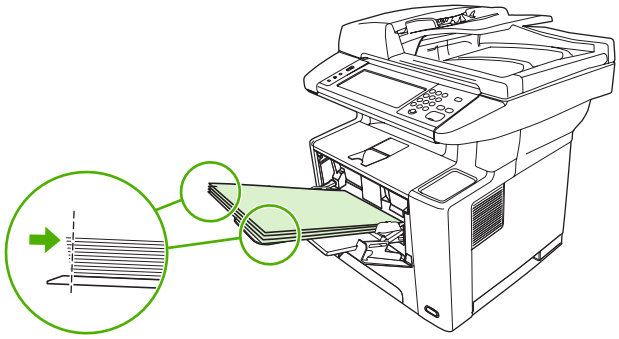
3. Slide the media-width guides slightly wider than the media.



4. Place media into the tray (short-edge in, print-side up). The media should be centered between the media-width guides and under the tabs on the media-width guides.



5. Slide the media-width guides inward until they lightly touch the media stack on both sides without bending it. Make sure that the media fits under the tabs on the media-width guides.

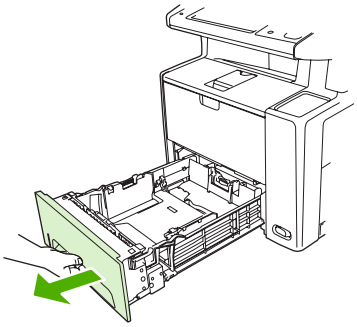


**NOTE:** Do not add media to tray 1 while the device is printing. This could cause a jam. Do not close the front door when the device is printing.

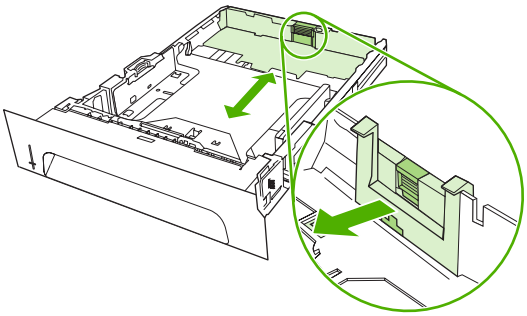
## Load tray 2 and optional tray 3

Trays 2 and 3 support only paper. For supported paper sizes, see Media specifications on page 15.

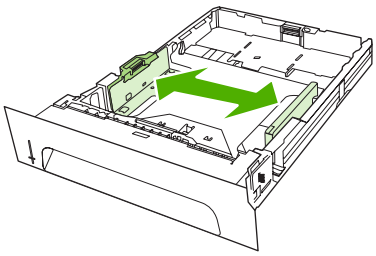
1. Pull the tray out of the device and remove any paper.



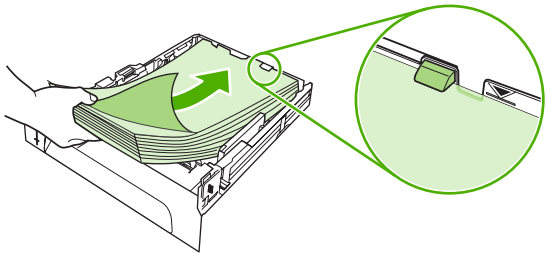
2. On the rear paper-length guide, press the tab and slide it so that the pointer matches the paper size that you are loading. Make sure that the guide clicks into place.



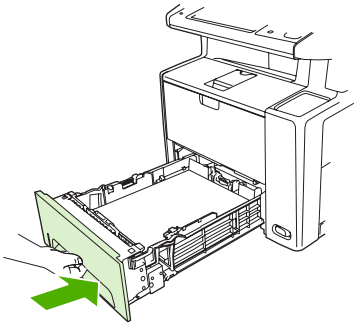
3. Adjust the side media-width guides outward so that the pointer matches the paper size that you are loading.



4. Place the paper in the tray and make sure that it is flat at all four corners. Keep the paper below the height tabs on the paper-length guide in the rear of the tray.



5. Push down on the paper to lock the metal paper-lift plate in place.
6. Slide the tray into the device.



## Configure trays

1. At the device control panel, touch Supplies Status.
2. Touch Trays.
3. Select the tray that you want to set and then touch Modify Tray.
4. Set the size and type of media that is loaded in the tray.

# Install supplies

Carefully follow the guidelines in this section when replacing device supplies.

## Supply replacement guidelines

To facilitate the replacement of supplies, keep the following guidelines in mind when setting up the device.

- Sufficient space is required above and in the front of the device for removing supplies.
- The device should be located on a flat, sturdy surface.

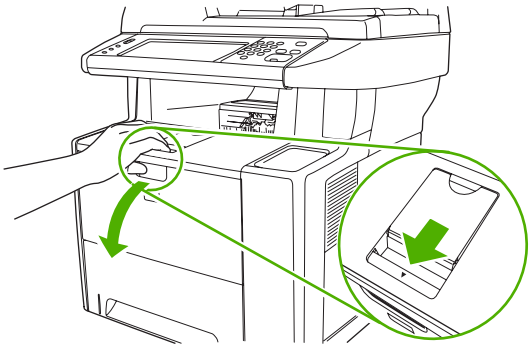
For instructions on installing supplies, see the installation guides provided with each supply item or see more information at www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp.

**NOTE:** Hewlett-Packard recommends the use of HP products in this device. Use of non-HP products may cause problems requiring service that is not covered by the HP warranty or service agreements.

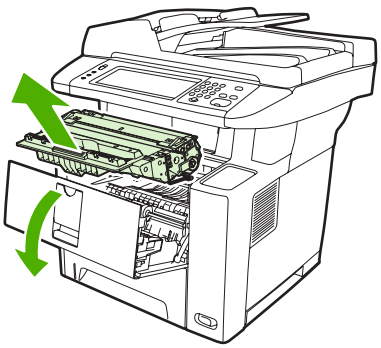
## Change the print cartridge

When a print cartridge approaches the end of useful life, a message appears on the control panel recommending that you order a replacement. The device can continue to print using the current print cartridge until a message appears instructing you to replace the cartridge.

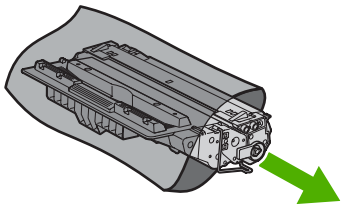
1. Open the front cover.



2. Remove the used print cartridge from the device.

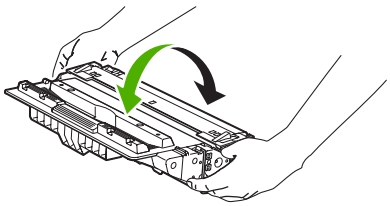


3. Remove the new print cartridge from the bag. Place the used print cartridge in the bag for recycling.

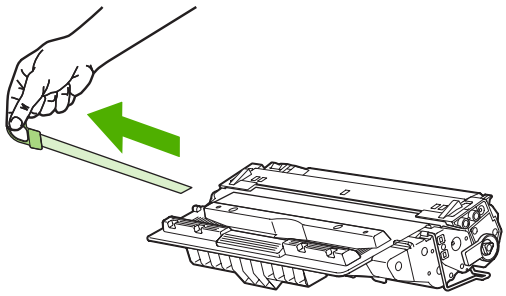


4. Grasp both sides of the print cartridge and distribute the toner by gently rocking the print cartridge.

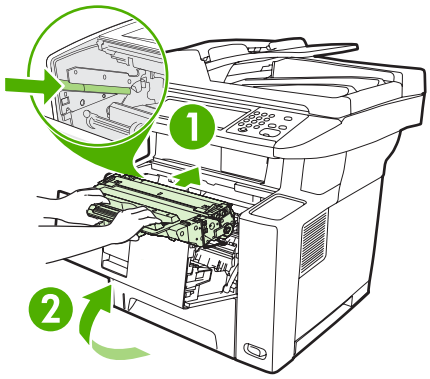
△ **CAUTION:** Do not touch the shutter or the surface of the roller.



5. Remove the shipping tape from the new print cartridge. Discard the shipping tape according to local regulations.



6. Align the print cartridge with the tracks inside the device, and, using the handle, insert the print cartridge until it is firmly seated, and then close the front door.




After a short time, the control panel should display **Ready**.

7. Installation is complete. Place the used print cartridge in the box in which the new cartridge arrived. See the enclosed recycling guide for recycling instructions.

8. If you are using a non-HP print cartridge, check the device control panel for further instructions.

For additional help, go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp.

# Install accessories

## Install memory

You might want to add more memory to the device if you often print complex graphics, print PostScript (PS) documents, or use many downloaded fonts. Added memory also gives you more flexibility in supporting job-storage features, such as quick copying.

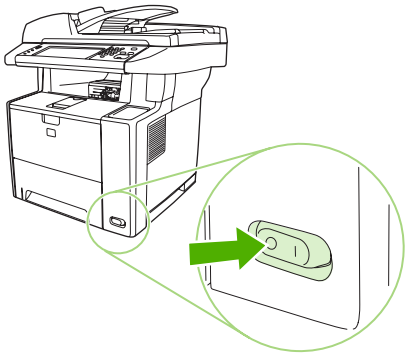
### Install device memory

△ **CAUTION:** Static electricity can damage DIMMs. When handling DIMMs, either wear an antistatic wrist strap or frequently touch the surface of the DIMM antistatic package, then touch bare metal on the device.

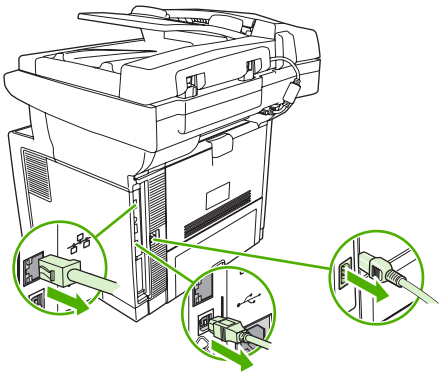
The HP LaserJet M3027/M3035 devices come with one DIMM slot. If desired, you can replace a DIMM installed in the slot with a higher memory DIMM.

If you have not already done so, print a configuration page to find out how much memory is installed in the device before adding more memory. See Use information pages on page 49.

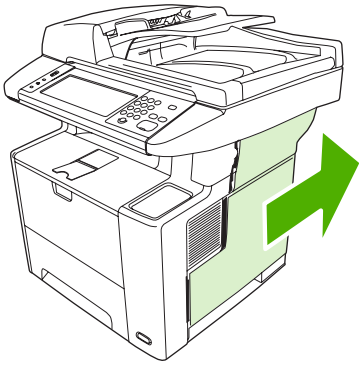
1. After the configuration page has printed, turn the device off and disconnect the power cord.



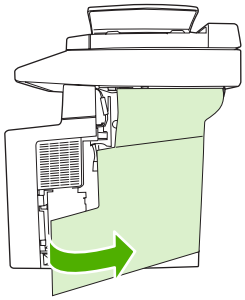
2. Disconnect all interface cables.



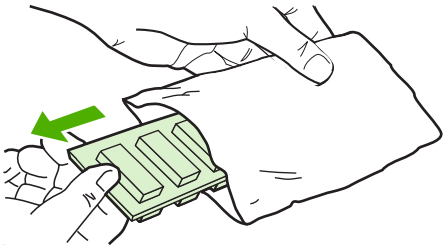
3. Remove the right side panel by sliding it towards the rear of the device until the side slides from the device.



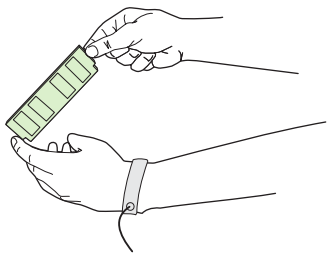
4. Open the access door by pulling on the metal tab.



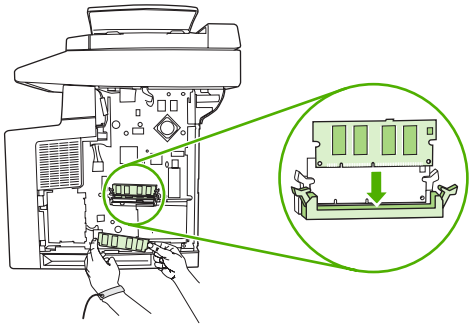
5. Remove the DIMM from the antistatic package.



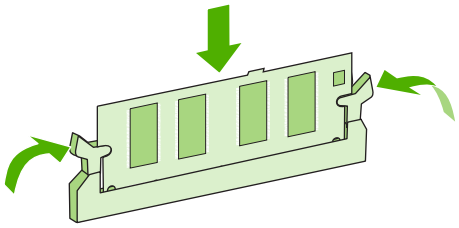
△ **CAUTION:** To reduce the possibility of damage caused by static electricity, always wear an electrostatic discharge (ESD) wrist strap or touch the surface of the antistatic package before handling DIMMs.



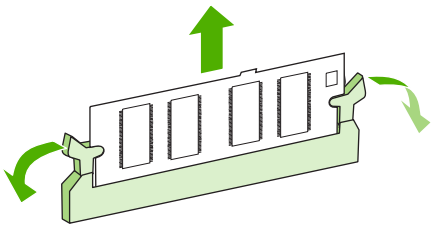
6. Hold the DIMM by the edges, and align the notches on the DIMM with the DIMM slot. (Check that the locks on each side of the DIMM slot are open.)



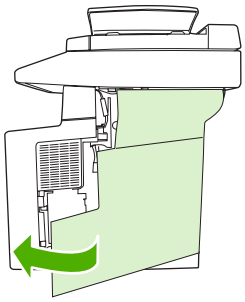
7. Press the DIMM straight into the slot, and press firmly. Make sure the locks on each side of the DIMM snap into place.



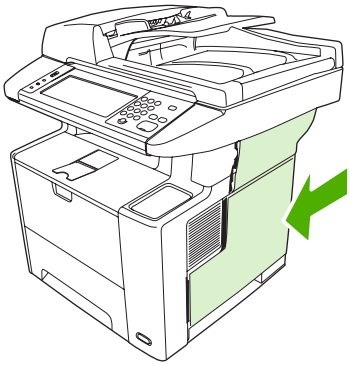
**NOTE:** To remove a DIMM, first release the locks.



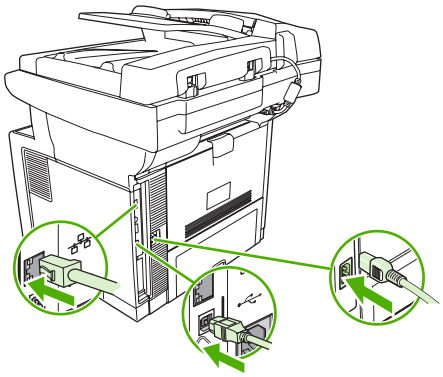
8. Close the access door, and press firmly until it snaps into place.



9. To replace the right side panel, line up the alignment arrows and slide the panel toward the front of the device until it latches into place.



10. Reconnect the interface cable(s) and the power cord.



11. Turn the device on.

## Check DIMM installation

After installing the DIMM, make sure that the installation was successful.

### Verify that DIMM is installed correctly

1. Turn the device on. Check that the Ready light is illuminated after the device has gone through the startup sequence. If an error message appears, a DIMM might have been incorrectly installed. See Control-panel messages on page 217.
2. Print a configuration page (see Use information pages on page 49).
3. Check the memory section on the configuration page and compare it to the configuration page that was printed before the memory installation. If the amount of memory has not increased, the DIMM might not be installed correctly, or the DIMM might be defective. Repeat the installation procedure. If necessary, install a different DIMM.

**NOTE:** If you installed a device language (personality), check the "Installed Personalities and Options" section on the configuration page. This area should list the new device language.

## Enable memory for Windows

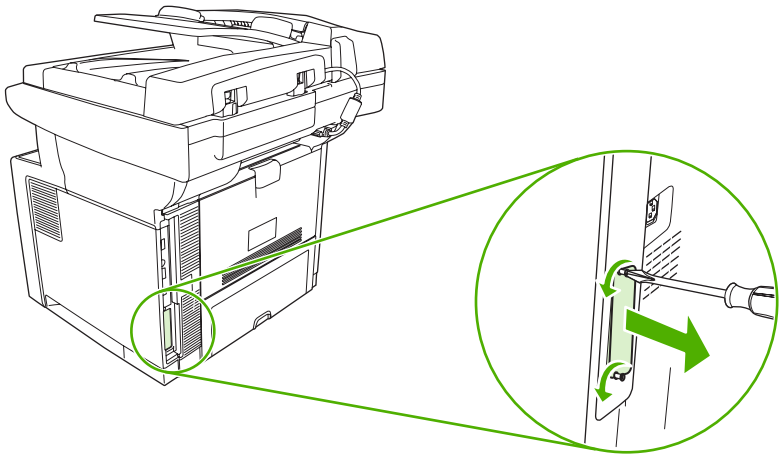
1. On the **Start** menu, **Settings**, and **Printers** or **Printers and Faxes**.
2. Select this device and select **Properties**.
3. On the **Configure** tab, click **More**.
4. In the **Total Memory** field, type or select the total amount of memory that is now installed.
5. Click **OK**.

## Use HP Jetdirect print server cards

Follow these procedures to install or remove an EIO card.

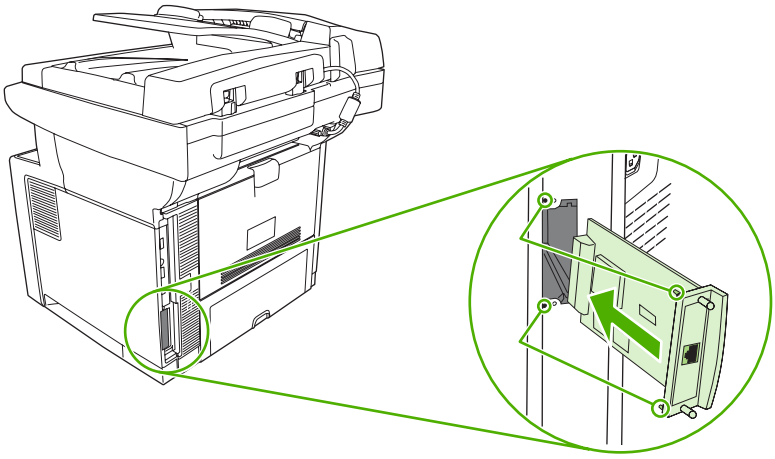
### Install an HP Jetdirect print server card

1. Turn off the device.
2. Remove the two screws and cover plate from the EIO slot on the back of the device.

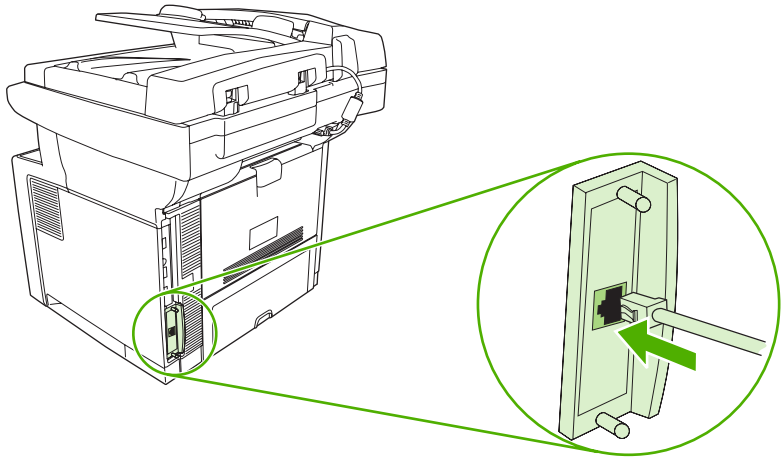


**NOTE:** Do not discard the screws or the cover plate. Save them for future use if you remove the EIO card.

3. Install the EIO card in the EIO slot and tighten the screws.



4. Connect the network cable to the EIO card.



5. Turn on the device, and then print a configuration page to verify that the new EIO device is recognized. See Use information pages on page 49.

**NOTE:** When you print a configuration page, an HP Jetdirect configuration page that contains network configuration and status information also prints.

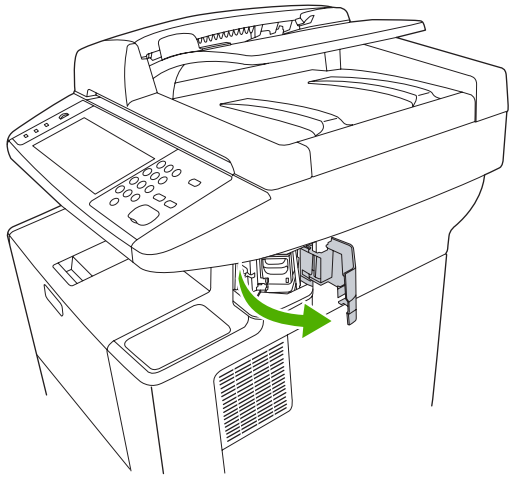
## Remove an HP Jetdirect print server card

1. Turn off the device.
2. Disconnect the network cable from the EIO card.
3. Loosen the two screws from the EIO card, and then remove the EIO card from the EIO slot.
4. Place the cover plate from the EIO slot onto the back of the device. Insert and tighten the two screws.
5. Turn on the device.

## Load staples

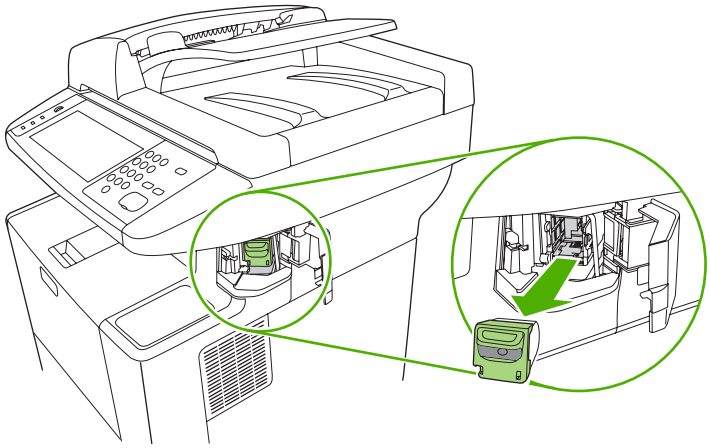
Each staple cartridge holds 1,500 unformed staples. To load staples into the device, insert a staple cartridge.

1. Open the stapler door.

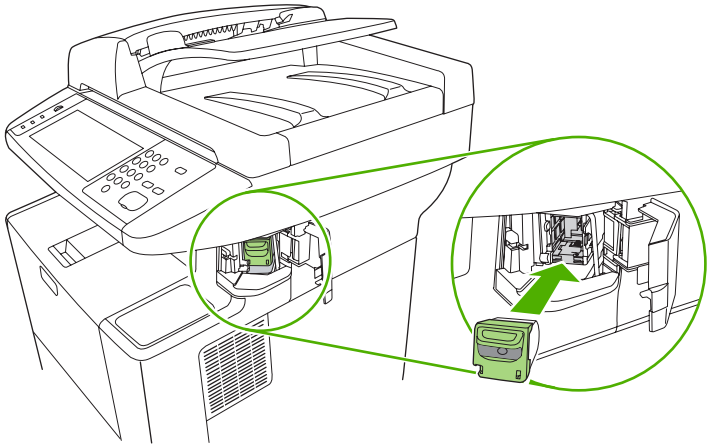


**NOTE:** Opening the stapler door disables the stapler.

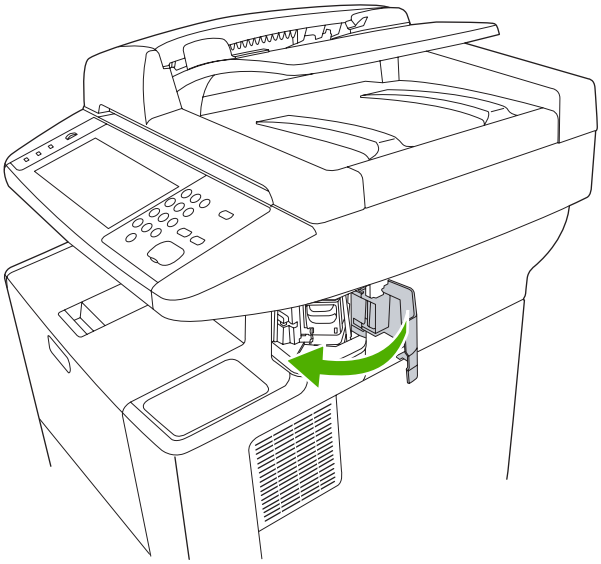
2. If you are replacing a staple cartridge (for example, if your staple cartridge has run out of staples), remove the staple cartridge from the device.



3. Insert a new staple cartridge into the opening inside the staple door.



4. Close the stapler door.



# 3 Maintenance

## Chapter contents


- Manage supplies
- Clean the device
- Management tools

# Manage supplies

Using, storing, and monitoring the print cartridge can help ensure high-quality output.

## Supplies life

The average cartridge yield is 6,500 pages (for the Q7551A cartridge) or 13,000 pages (for the Q7551X cartridge), in accordance with ISO/IEC 19752. Actual cartridge yield depends on specific use.

△ **CAUTION:** The Economode feature allows the device to use less toner per page. Selecting Economode extends the life of the toner supply and reduces the cost per page but reduces print quality. The printed image is lighter but is adequate for printing drafts or proofs. Hewlett-Packard does not recommend full-time use of Economode. If Economode is used full-time, the toner supply might outlast the mechanical parts in the print cartridge. If print quality begins to degrade under these circumstances, install a new print cartridge even if the print cartridge still contains toner.

## Approximate print-cartridge replacement intervals

| Print cartridge | Page count | Approximate time period[1] |
|---|---|---|
| Black (Q7551A) | 6,500 pages[1] | 3 months |
| Black (Q7551X) | 13,000 pages | 6 months |

[1] Approximate life is based on 2,000 pages per month.

To order supplies online, go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp .

# Manage the print cartridge

## Print-cartridge storage

Do not remove the print cartridge from its package until you are ready to use it.

△ **CAUTION:** To prevent damage to the print cartridge, do not expose it to light for more than a few minutes.

## Use genuine HP print cartridges

When you use a genuine new HP print cartridge, you can obtain the following supplies information:

- Percentage of supplies remaining
- Estimated number of pages remaining
- Number of pages printed

## HP policy on non-HP print cartridges

Hewlett-Packard Company cannot recommend the use of non-HP print cartridges, either new or remanufactured. Because they are not HP products, HP cannot influence their design or control their quality.

**NOTE:** Any damage caused by a non-HP print cartridge is not covered under the HP warranty and service agreements.

To install a new HP print cartridge, see Change the print cartridge on page 28. To recycle the used cartridge, follow the instructions included with the new cartridge.

## Print-cartridge authentication

The device automatically authenticates the print cartridge when it is inserted into the device. During authentication, the device notifies you whether a cartridge is a genuine HP print cartridge.

If the device control-panel message states that this is not a genuine HP print cartridge and you believe you purchased an HP print cartridge, see HP fraud hotline and Web site on page 43.

## HP fraud hotline and Web site

Call the HP fraud hotline (1-877-219-3183, toll-free in North America) or go to www.hp.com/go/anticounterfeit when you install an HP print cartridge and the control-panel message says the cartridge is non-HP. HP will help determine if the cartridge is genuine and take steps to resolve the problem.

Your print cartridge might not be a genuine HP print cartridge if you notice the following:

- You are experiencing a high number of problems with the print cartridge.
- The cartridge does not look like it usually does (for example, the orange pull tab is missing, or the packaging differs from HP packaging).

# Clean the device

Over time, particles of toner and paper accumulate inside the device. This can cause print-quality problems during printing. Cleaning the device eliminates or reduces these problems.

Clean the paper path and print-cartridge areas every time that you change the print cartridge or whenever print-quality problems occur. As much as possible, keep the device from dust and debris.

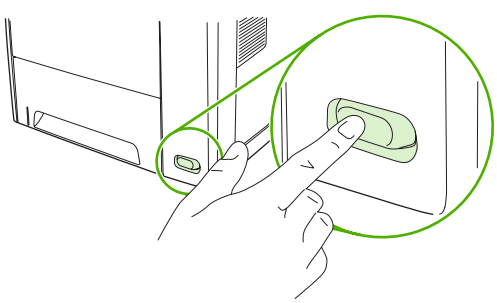
## Clean the exterior

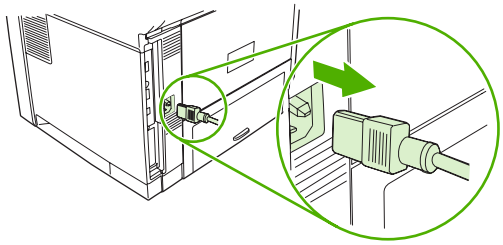
Use a soft, damp, lint-free cloth to wipe dust, smudges, and stains off of the exterior of the device.

## Clean the ADF

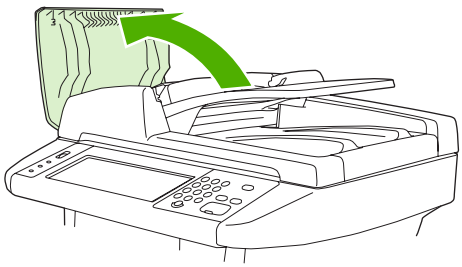
If the ADF has trouble feeding documents, clean the ADF pickup roller assembly.

1. Turn off the device and unplug the power cord.

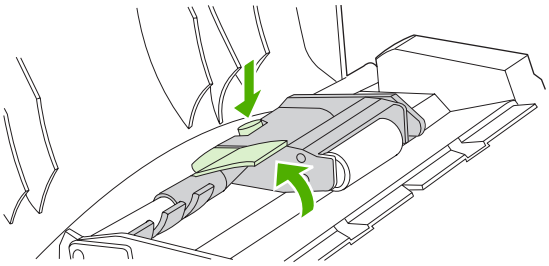




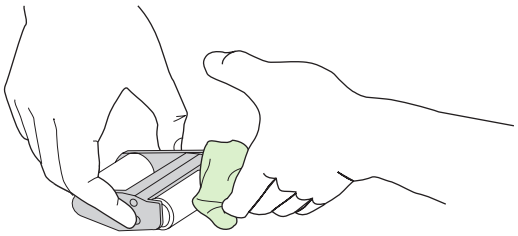
2. Open the ADF cover.



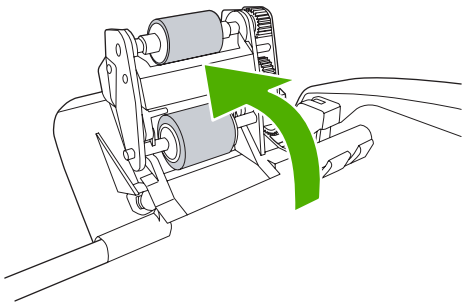
3. Press the round blue button while lifting the green lever. Rotate the green lever until it stops in the open position. The pickup roller assembly should remain on the surface.



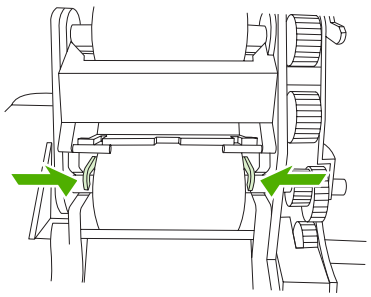
4. Remove the assembly, and then wipe the assembly with a soft, dry, lint-free cloth.



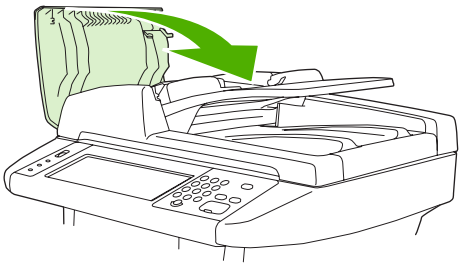
5. Replace the assembly, with the largest roller down, in the upright holder, and then press until the assembly snaps into place.



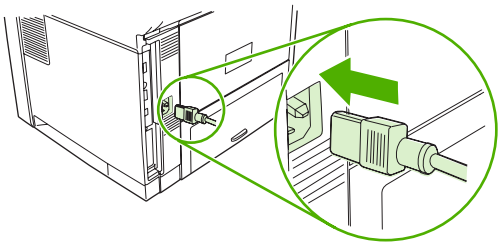
6. Make sure that both sides of the assembly are secured by the blue hooks.

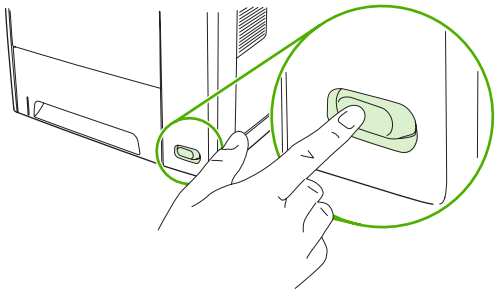


7. Lower the roller assembly, and then close the ADF cover.



8. Plug in the device, and then turn on the device.

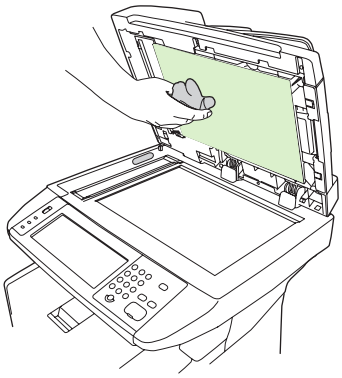




## Clean the scanner lid backing

Minor debris can accumulate on the white document lid backing that is located underneath the scanner lid.

1. Open the scanner lid.
2. Clean the white document lid backing by using a soft cloth or sponge that has been moistened with a mild soap and warm water.



3. Wash the backing gently to loosen debris; do not scrub the backing.
4. Dry the backing by using a chamois or soft cloth.

△ **CAUTION:** Do not use paper-based wipes because they might scratch the backing.

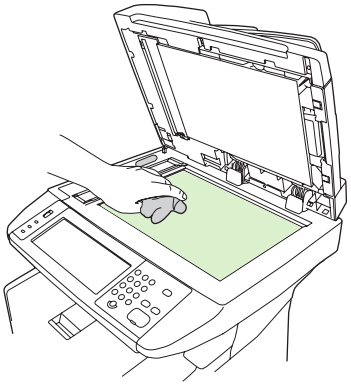
5. If this does not clean the backing well enough, repeat the previous steps and use isopropyl alcohol to dampen the cloth or sponge, and then wipe the backing thoroughly with a damp cloth to remove any residual alcohol.

## Clean the scanner glass

Dirty glass, from fingerprints, smudges, hair, and so on, slows down performance and affects the accuracy of special features such as fit-to-page and copy.

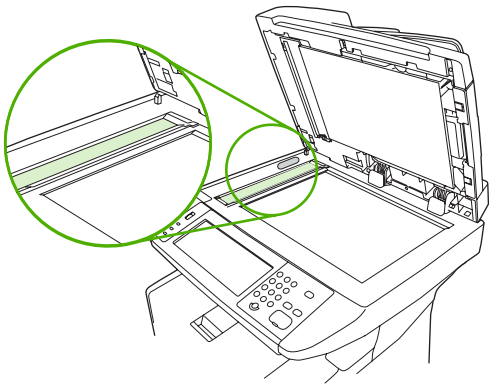
**NOTE:** If streaks or other defects appear only on copies produced using the automatic document feeder (ADF), clean the scanner strip (step 3). It is not necessary to clean the scanner glass.

1. Open the scanner lid.
2. Clean the glass by using a damp, lint-free cloth.



△ **CAUTION:** Do not use abrasives, acetone, benzene, ammonia, ethyl alcohol, or carbon tetrachloride on any part of the device; these can damage the device. Do not place liquids directly on the glass. They might seep under it and damage the device.

3. Clean the scanner strip by using a damp, lint-free cloth.



## Clean the fuser

Run the device cleaning page to keep the fuser free of toner and paper particles that can sometimes accumulate. Accumulation of toner and particles can cause specks to appear on the front or back side of your print jobs.

To ensure optimum print quality, HP recommends that you use the cleaning page every time that you replace the print cartridge.

The cleaning procedure takes about 2.5 minutes to complete. A **CLEANING** message appears on the device control panel display while the cleaning is taking place.

In order for the cleaning page to work correctly, print the page on copier-grade paper (not bond, heavy, or rough paper).

### Create and use the cleaning page

1. From the Home screen, touch Administration.
2. Touch Print Quality.
3. Touch Calibration/Cleaning.
4. Touch Create Cleaning Page.

   The device prints a cleaning page.
5. Follow the instructions printed on the cleaning page.

## Clean spilled toner

If you spill toner on your clothes, wash them in *cold* water. Hot water sets the toner into the fabric.

# Management tools

## Use information pages

From the control panel, print pages that give details about the device and its current configuration. The table below provides the instructions for printing the information pages.

| Page description | How to print the page |
|---|---|
| **Menu map**<br><br>Shows the control-panel menus and available settings. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Configuration/Status Pages.<br>4. Touch Administration Menu Map.<br>5. Touch Print.<br><br>The content of the menu map varies, depending on the options currently installed in the device.<br><br>For a complete list of control panel menus and possible values, see the user guide. |
| **Configuration page**<br><br>Shows device settings and installed accessories. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Configuration/Status Pages.<br>4. Touch Configuration Page.<br>5. Touch Print.<br><br>**NOTE:** If the device contains an HP Jetdirect print server or an optional hard disk drive, additional configuration pages print that provide information about those devices. |
| **Supplies status page**<br><br>Shows print-cartridge toner levels. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Configuration/Status Pages.<br>4. Touch Supplies Status Page.<br>5. Touch Print.<br><br>**NOTE:** If you are using non-HP supplies, the supplies status page might not show the remaining life for those supplies. For more information, see HP policy on non-HP print cartridges on page 43. |
| **Usage page**<br><br>Shows a page count for each size of paper printed, the number of one-sided (simplexed) or two-sided (duplexed) pages, and the average percentage of coverage. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Configuration/Status Pages.<br>4. Touch Usage Page.<br>5. Touch Print. |

| Page description | How to print the page |
| --- | --- |
| **File directory**<br><br>Contains information for any mass storage devices, such as flash drives, memory cards, or hard disks, that are installed in the device. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Configuration/Status Pages.<br>4. Touch File Directory.<br>5. Touch Print. |
| **Fax reports**<br><br>Five reports show fax activity, fax calls, billing codes, blocked fax numbers, and speed-dial numbers.<br><br>**NOTE:** Fax reports are available only on device models that have fax capabilties. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Fax Reports.<br>4. Touch one of the following buttons to print the corresponding report:<br>◦ Fax Activity Log<br>◦ Fax Call Report<br>◦ Billing Codes Report<br>◦ Blocked Fax List<br>◦ Speed Dial List<br>5. Touch Print.<br><br>For more information, see the fax guide that came with the device. |
| **Font lists**<br><br>Shows which fonts are currently installed in the device. | 1. From the Home screen, touch Administration.<br>2. Touch Information.<br>3. Touch Sample Pages/Fonts.<br>4. Touch either PCL Font List or PS Font List.<br>5. Touch Print.<br><br>**NOTE:** The font lists also show which fonts reside on a hard disk accessory or DIMM. |

## Use the HP Easy Printer Care software

The HP Easy Printer Care software is a program that you can use for the following tasks:

- Check the device status.
- Check supplies status.
- Set up alerts.
- Gain access to problem-solving and maintenance tools.

You can use the HP Easy Printer Care software when the device is directly connected to your computer or when it is connected to a network. You must perform a complete software installation to use the HP Easy Printer Care software.

**NOTE:** You do not have to have Internet access to open and use the HP Easy Printer Care software. However, if you click a Web-based link, you must have Internet access to go to the site associated with the link.

### Open the HP Easy Printer Care software

Use one of the following methods to open HP Easy Printer Care software:

- On the **Start** menu, select **Programs**, select **Hewlett-Packard**, and then select **HP Easy Printer Care software**.
- In the Windows system tray (in the lower-right corner of the desktop), double-click the HP Easy Printer Care software icon.
- Double-click the desktop icon.

## HP Easy Printer Care software sections

| Section | Options |
| --- | --- |
| **Device List** tab<br><br>Shows information about each device in the **Devices** list | • Device information, including device name, make, and model<br>• An icon (if the **View as** drop-down box is set to **Tiles**, which is the default setting)<br>• Any current alerts for the device<br><br>If you click a device in the list, the HP Easy Printer Care software opens the **Overview** tab for that device. |
| **Supplies Ordering** window<br><br>Provides access to online or e-mail supplies ordering | • Ordering list: Shows the supplies that you can order for each device. If you want to order a certain item, click the **Order** check box for that item in the supplies list.<br>• **Shop Online for Supplies** button: Opens the HP SureSupply Web site in a new browser window. If you have checked the **Order** check box for any items, the information about those items can be transferred to the Web site, where you will receive information on options for purchasing your selected supplies.<br>• **Print Shopping List** button: Prints the information for the supplies that have the **Order** check box selected. |
| **Alert Settings** window<br><br>Allows you to configure the device to automatically notify you of device issues | • Alerts on or off: Activates or deactivates the alerts feature.<br>• When alerts appear: Sets when you want alerts to appear—either when you are printing to that particular device, or anytime there is a device event.<br>• Alert event type: Sets whether you want alerts for only critical errors, or for any error, including continuable errors.<br>• Notification method: Sets what type of alert should appear (pop-up message or desktop alert). |
| **Overview** tab<br><br>Contains basic status information for the device | • **Devices** list: Shows the devices that you can select.<br>• **Device Status** section: Shows device status information. This section will indicate device alert conditions, such as an empty print cartridge. It also shows device-identification information, control-panel messages, and print-cartridge levels. After you correct a problem with the device, click the button to update the section.<br>• **Supplies Status** section: Shows detailed supplies status, such as the percentage of toner remaining in the print cartridge and the status of the media that is loaded in each tray.<br>• **Supplies Details** link: Opens the supplies status page to view more detailed information about device supplies, ordering information, and recycling information. |
| **Support** tab<br><br>Provides help information and links | • Provides device information, including alerts for items needing attention.<br>• Provides links to troubleshooting and maintenance tools. |
| **Find Other Printers** window<br><br>Allows you to add more printers to your printer list | Clicking the **Find Other Printers** link in the **Devices** list opens the **Find Other Printers** window. The **Find Other Printers** window provides a utility that detects other network printers so that you can add them to the **Devices** list and then monitor those devices from your computer. |

## Use the embedded Web server

When the device is connected to the network, the embedded Web server is automatically available.

**NOTE:** When the device is directly connected to a computer, use the HP Easy Printer Care software to view the device status.

- View device control status information
- Set the type of paper loaded in each tray
- Determine the remaining life on all supplies and order new ones
- View and change tray configurations
- View and change the device control panel menu configuration
- View and print internal pages
- Receive notification of device and supplies events
- View and change network configuration
- View support content that is specific to the current state of the device

To use the embedded Web server, you must have Microsoft Internet Explorer 4 and later or Netscape Navigator 4 and later. The embedded Web server works when the device is connected to an IP-based network. The embedded Web server does not support IPX-based or AppleTalk device connections. You do not need Internet access to open and use the embedded Web server.

### Open the embedded Web server by using a network connection

1. In a supported Web browser on your computer, type the device IP address or host name in the address/URL field. To find the IP address or host name, print a configuration page. See Use information pages on page 49.

   **NOTE:** After you open the URL, you can bookmark it so that you can return to it quickly in the future.

2. The embedded Web server has three tabs that contain settings and information about the device: the **Information** tab, the **Settings** tab, and the **Networking** tab. Click the tab that you want to view.

   See Embedded Web server sections on page 54 for more information about each tab.

## Embedded Web server sections

| Tab or section | Options |
| --- | --- |
| **Information** tab<br><br>Provides device, status, and configuration information | • **Device Status**: Shows the device status and shows the life remaining of HP supplies, with 0% indicating that a supply is empty. The page also shows the type and size of print paper set for each tray. To change the default settings, click **Change Settings**.<br>• **Configuration Page**: Shows the information found on the configuration page.<br>• **Supplies Status**: Shows the life remaining of HP supplies, with 0 percent indicating that a supply is empty. This page also provides supplies part numbers. To order new supplies, click **Order Supplies** in the **Other Links** area on the left side of the window.<br>• **Event log**: Shows a list of all device events and errors.<br>• **Usage page**: Shows a summary of the number of pages the device has printed, grouped by size and type.<br>• **Device Information**: Shows the device network name, address, and model information. To change these entries, click **Device Information** on the **Settings** tab.<br>• **Control Panel**: Shows messages from the device control panel, such as **Ready** or **Sleep mode on**.<br>• **Print**: Allows you to send print jobs to the device. |
| **Settings** tab<br><br>Provides the ability to configure the device from your computer | • **Configure Device**: Allows you to configure device settings. This page contains the traditional menus found on devices using a control-panel display.<br>• **E-mail Server**: Network only. Used in conjunction with the **Alerts** page to set up incoming and outgoing e-mail, as well as to set e-mail alerts.<br>• **Alerts**: Network only. Allows you to set up to receive e-mail alerts for various device and supplies events.<br>• **AutoSend**: Allows you to configure the device to send automated e-mails regarding device configuration and supplies to specific e-mail addresses.<br>• **Security**: Allows you to set a password that must be entered to gain access to the **Settings** and **Networking** tabs. Enable and disable certain features of the embedded Web server.<br>• **Edit Other Links**: Allows you to add or customize a link to another Web site. This link is displayed in the **Other Links** area on all embedded Web server pages.<br>• **Device Information**: Allows you to name the device and assign an asset number to it. Enter the name and e-mail address for the primary contact who will receive information about the device.<br>• **Language**: Allows you to determine the language in which to display the embedded Web server information.<br>• **Date & Time**: Allows time synchronization with a network time server.<br>• **Wake Time**: Allows you to set or edit a wake time for the device.<br><br>**NOTE:** The **Settings** tab can be password-protected. If this device is on a network, always consult with the system administrator before changing settings on this tab. |

| Tab or section | Options |
| --- | --- |
| **Digital Sending** tab<br><br>Provides the ability to configure digital sending options | • **General Settings**: Allows you to set digital-sending administrator information.<br>• **Send to E-mail**: Allows you to configure SMTP settings, set the maximum e-mail attachment size, and set the default e-mail address for the device.<br>• **Send to Fax**: Allows you to configure the send-to-fax features for the device.<br>• **Send to Folder**: Allows you to send scanned documents to shared folders or FTP sites.<br>• **Addressing**: Allows you to set features so that the device can obtain addresses directly from the database of an LDAP server instead of from a replicated LDAP Address Book.<br>• **Address Book**: Allows you to add a predefined list of destination addresses, in the form of a comma-separated value (.CSV) file, to be imported into the internal address book of the device.<br>• **Log**: Allows you to view digital sending job information, including any errors that occur.<br>• **Preferences**: Allows you to configure general settings for the digital-sending features. |
| **Networking** tab<br><br>Provides the ability to change network settings from your computer | Network administrators can use this tab to control network-related settings for the device when it is connected to an IP-based network. This tab does not appear if the device is directly connected to a computer, or if the device is connected to a network using anything other than an HP Jetdirect print server.<br><br>**NOTE:** The **Networking** tab can be password-protected. |
| **Other links**<br><br>Contains links that connect you to the Internet | • **HP Instant Support™**: Connects you to the HP Web site to help you find solutions. This service analyzes your device error log and configuration information to provide diagnostic and support information specific to your device.<br>• **Order Supplies**: Connects to the HP SureSupply Web site, where you will receive information on options for purchasing original HP supplies, such as print cartridges and paper.<br>• **Product Support**: Connects to the support site for the device, from which you can search for help regarding general topics.<br><br>**NOTE:** You must have Internet access in order to use any of these links. If you use a dial-up connection and did not connect when you first opened the embedded Web server, you must connect before you can visit these Web sites. Connecting might require that you close the embedded Web server and reopen it. |

## Use HP Web Jetadmin software

HP Web Jetadmin is a Web-based software solution for remotely installing, monitoring, and troubleshooting network-connected peripherals. The intuitive browser interface simplifies cross-platform management of a wide range of devices, including HP and non-HP devices. Management is proactive, allowing network administrators the ability to resolve issues before users are affected. Download this free, enhanced-management software at www.hp.com/go/webjetadmin_software.

To obtain plug-ins to HP Web Jetadmin, click **plug-ins**, and then click the **download** link that is next to the name of the plug-in that you want. The HP Web Jetadmin software can automatically notify you when new plug-ins are available. On the **Product Update** page, follow the directions to automatically connect to the HP Web site.

If installed on a host server, HP Web Jetadmin is available to any client through a supported Web browser, such as Microsoft Internet Explorer 6.0 for Windows or Netscape Navigator 7.1 for Linux. Browse to the HP Web Jetadmin host.

**NOTE:** Browsers must be Java-enabled. Browsing from an Apple PC is not supported.

## Use the HP Printer Utility for Macintosh

Use the HP Printer Utility to configure and maintain a device from a Mac OS X computer.

### Open the HP Printer Utility

#### Open the HP Printer Utility in Mac OS X V10.2.8

1. Open the Finder, and then click **Applications**.
2. Click **Library**, and then click **Printers**.
3. Click **hp**, and then click **Utilities**.
4. Double-click **HP Printer Selector** to open the HP Printer Selector.
5. Select the device that you want to configure, and then click **Utility**.

#### Open the HP Printer Utility in Mac OS X V10.3, V10.4 and later

1. In the Dock, click the **Printer Setup Utility** icon.

   **NOTE:** If the **Printer Setup Utility** icon does not appear in the Dock, open the Finder, click **Applications**, click **Utilities**, and then double-click **Printer Setup Utility**.

2. Select the device that you want to configure, and then click **Utility**.

## HP Printer Utility features

The HP Printer Utility consists of pages that you open by clicking in the **Configuration Settings** list. The following table describes the tasks that you can perform from these pages.

| Item | Description |
|---|---|
| **Configuration Page** | Prints a configuration page. |
| **Supplies Status** | Shows the device supplies status and provides links for online supplies-ordering. |
| **HP Support** | Provides access to technical assistance, online supplies ordering, online registration, and recycling and return information. |
| **File Upload** | Transfers files from the computer to the device. |
| **Upload Fonts** | Transfers font files from the computer to the device. |
| **Firmware Update** | Transfers updated firmware files from the computer to the device. |
| **Duplex Mode** | Turns on the automatic two-sided printing mode. |
| **Economode & Toner Density** | Turns on the Economode setting to conserve toner, or adjusts toner density. |
| **Resolution** | Changes the resolution settings, including the REt setting. |
| **Lock Resources** | Locks or unlocks storage products, such as a hard disk. |
| **Stored Jobs** | Manages print jobs that are stored on the device hard disk. |
| **Trays Configuration** | Changes the default tray settings. |
| **IP Settings** | Changes the device network settings and provides access to the embedded Web server. |
| **Bonjour Settings** | Provides the ability to turn on or off Bonjour support or change the device service name that is listed on a network. |
| **Additional Settings** | Provides access to the embedded Web server. |
| **E-mail Alerts** | Configures the device to send e-mail notices for certain events. |

# 4 Theory of operation

## Chapter contents


- Basic operation
- Internal components
- Timing
- Print cartridge memory system
- Electrical structure

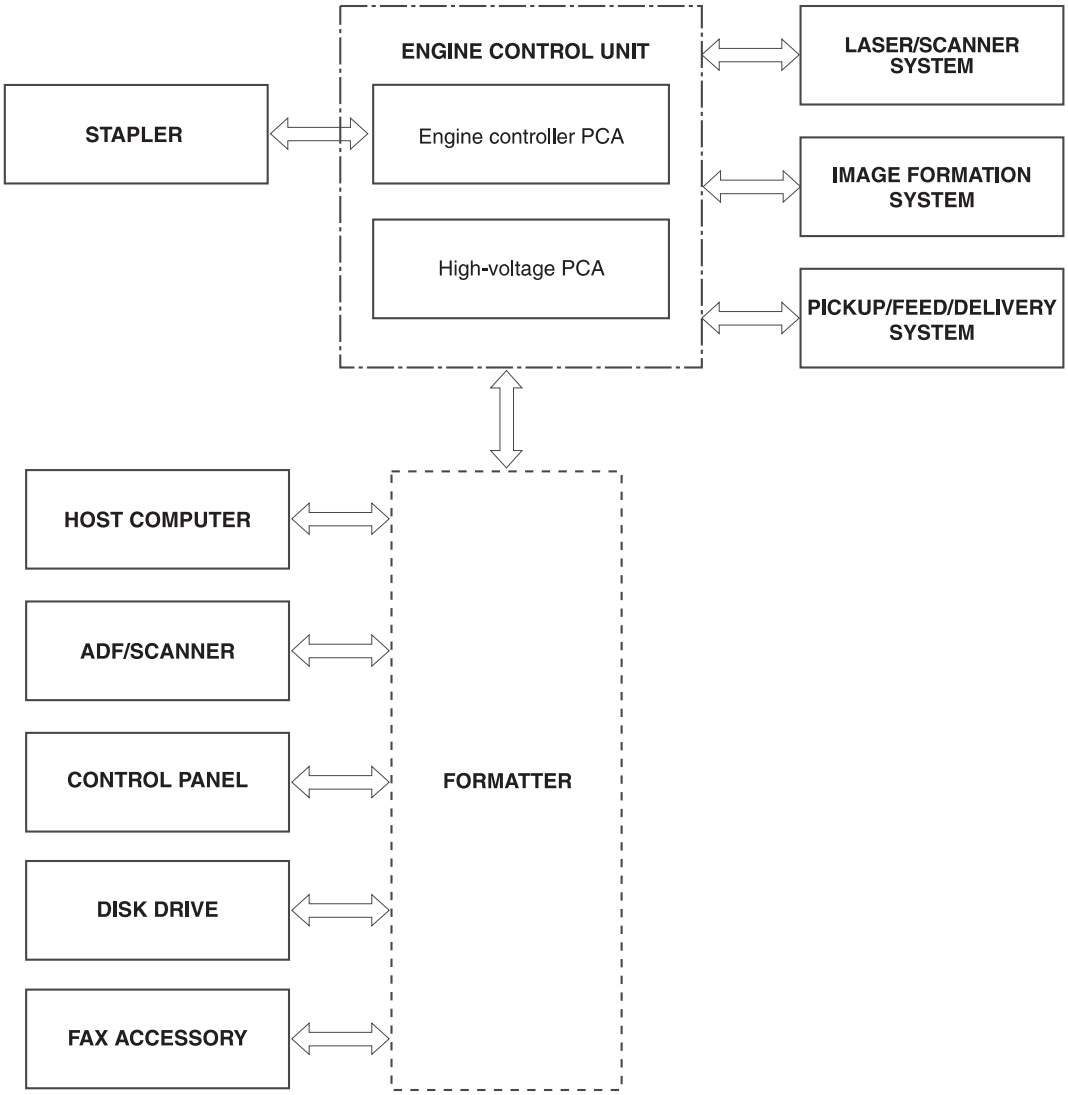
# Basic operation

This chapter presents an overview of the relationships among major components in the device, and includes a detailed discussion of the image-formation system. The following systems are discussed:

- Stapler
- ADF/scanner system
- Formatter
- Engine control unit
- Laser/scanner system
- Pickup/feed/delivery system
- Image-formation system

Figure 4-1 Block diagram on page 60 illustrates the relationships between the systems.

**Figure 4-1** Block diagram



## Stapler

The stapler has no logic and no interaction with the formatter. The stapler is functional during the power-on cycle of the MFP as long as the power switch of the MFP is in the on position. If the MFP is in power-save mode and a user staples a document or opens the stapler door, the engine will not wake because it does not know that activity has occurred.

The stapler is wired into line voltage immediately after the power switch; therefore, the stapler does not interact with the Engine Control Unit (ECU) because it is split off when the current is still AC. The power cable plugs into the printer, then goes through the switch and splits, and then the AC line goes up to the power-supply brick where it is converted to the 24V that goes to the stapler. The interlock switch for the stapler door cuts the 24V power when the door is opened.

# ADF/scanner system

## ADF

If the ADF fails, it can be replaced as a whole-unit replacement part.

### Sensors in the ADF

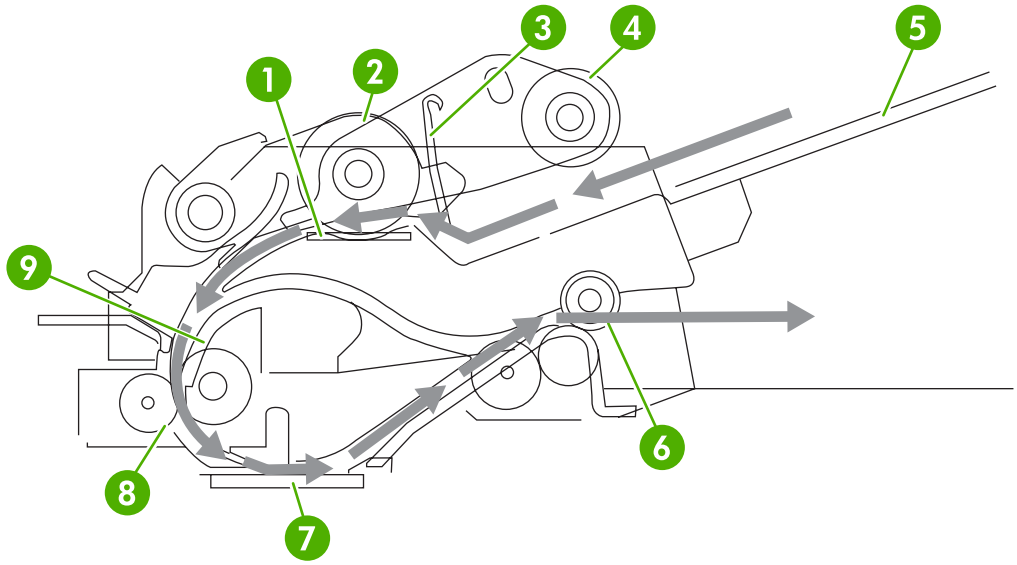
The ADF contains the following sensors:

- **ADF-cover sensor.** Detects whether the ADF cover is open or closed.
- **Top-of-page sensor.** Determines the paper size by detecting the top of the page (before sending a page through the ADF) and by detecting the end of the page (after feeding/scanning is complete).
- **Paper-present sensor.** Detects whether a document is present in the ADF. If paper is present in the ADF when copies are made, the device scans the document using the ADF. If no paper is present when copies are made, the device scans the document using the scanner glass.

### ADF paper path

The ADF feeds documents past the ADF glass for scanning. Figure 4-2 ADF path for single-sided documents on page 61 shows the path for single-sided documents.

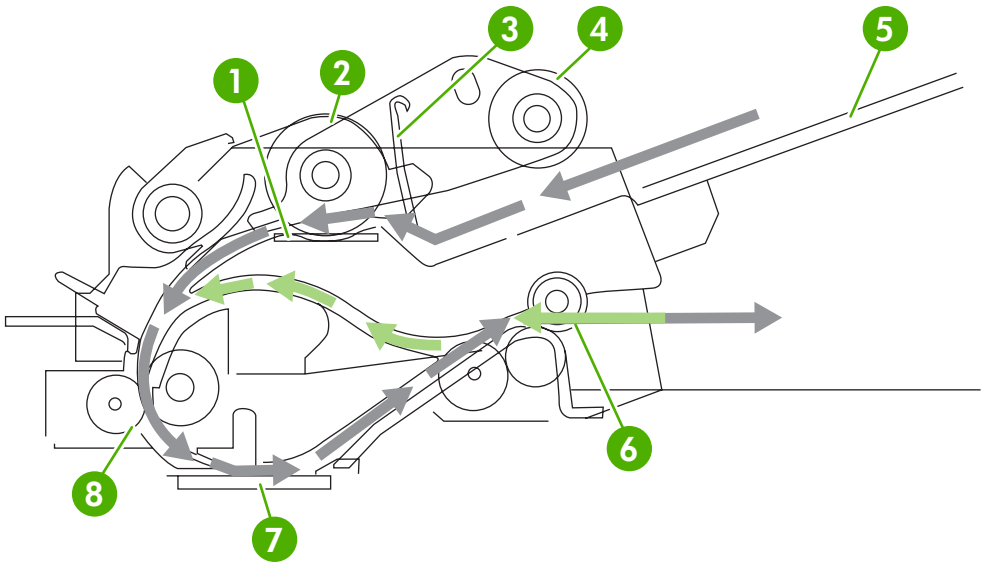
**Figure 4-2** ADF path for single-sided documents




| | | | |
|---|---|---|---|
| 1 | Separation pad | 6 | Delivery/duplex-feed rollers |
| 2 | Pickup roller | 7 | ADF glass |
| 3 | Stack stop | 8 | ADF feed rollers |
| 4 | Pre-pick roller | 9 | Top-of-page sensor |
| 5 | ADF input tray | | |

For two-sided documents, the delivery rollers reverse the direction of each page to feed the second side of the document past the ADF glass. Figure 4-3 ADF path for two-sided documents on page 62 shows the path for two-sided documents.

**Figure 4-3** ADF path for two-sided documents




**NOTE:** Callouts in Figure 4-3 ADF path for two-sided documents on page 62 are identical to callouts in Figure 4-2 ADF path for single-sided documents on page 61 .

### ADF paper-size detection

The length of the media is determined by the top-of-page sensor, which is located inside the paper path of the ADF. This sensor detects the leading and trailing edges of the paper. The time it takes a page to pass by the top-of-page sensor is compared to a set of pre-defined values to determine the total page length.

The paper guides located in the ADF input tray do not have any paper-size sensors. To prevent image skew, it is extremely important to adjust the guides so that they fit snugly against the media. The minimum media width is 5.8 inches (the width for A5), and the maximum width is 8.5 inches (the width for letter and legal sizes).

The default length and width of the media is predetermined by firmware using localization values. For example, if the unit was sold for a US location, the length and width size expected by the top-of-page sensor will be letter-size paper.

**NOTE:** Any paper fed from the ADF that is not the default size (letter or A4 depending on the localization option) needs to be specified through the control panel using the Original Size option; otherwise, the scanner will consider it either letter or A4. This applies for copying and scanning to either e-mail or folder.

### Legal paper-size detection for flatbed

The M3035, M3035xs, M3027, and M3027x MFPs do not have paper-size sensors to enable automatic detection of the document size on the flatbed and ADF. This requires the user to manually select the correct paper size before scanning the job. It is likely that the user might forget to select the paper size before scanning. This will cause the image to crop to Letter size, after which the user has to send/scan the image again. This feature displays a popup screen when the user presses the **Start** button. The popup screen offers a list of original paper sizes. The user selects or changes the

paper size if required and then presses the **Scan** button. If the user does not make a selection, the popup screen times out after five seconds and scanning starts with the default paper size.

The Original Size popup is set to display or not display in the control-panel menus (**Administration > Default Job Options > Default Options For Originals > Original Size Prompt**). By default, the menu is displayed on the M3035, M3035xs, M3027 and M3027x MFPs with legal-size glass (CC476A, CC477A, CC478A, CC479A). If user sets the original paper size explicitly before pressing **Start**, the popup screen is not displayed.

The default value for the products is provided in the following table:

| Product(s) | Flatbed Original | ADF Original | Popup Display |
|---|---|---|---|
| **CC476A, CC477A, CC478A, CC479A** | Letter | Mixed Letter/ Legal | ON |
| **CB414A, CB415A, CB416A, CB417A** | Letter/ A4 | Mixed Letter/ Legal | OFF |

The menu item **Default Options For Originals > Paper Size** has the default value of **Mixed Ltr/Lgl** for the original paper size. This differs from the cold reset paper size, available under the **Service** menu. When a scan job is started from the ADF, the original paper size is the same as the one shown under the **Default Options For Originals > Paper Size** menu. When the job is started from the flatbed and the paper size is **Mixed Ltr/Lgl** in the **Default Options For Originals > Paper Size** menu, the original size is Letter. If the user intends to scan a different size, the user must select the paper size from the Original Size pop up screen.

When the cold reset paper size is set to A4, both the flatbed and ADF default is A4. Both the **Default Options For Originals > Paper Size** and the **Service > Original Size** menus show A4 as the default for both the flatbed and the ADF. When the cold reset paper size is set to **Letter**, the **Default Options For Originals > Paper Size** menu displays the default paper size as **Mixed Ltr/Lgl**.

If the default paper size is **Mixed Ltr/Lgl**, the following options are disabled when the user goes to Copy screen:

- Scaling
- Paper Selection
- N-up
- Booklet Format

Change the size to re-enable these options.

### ADF skew

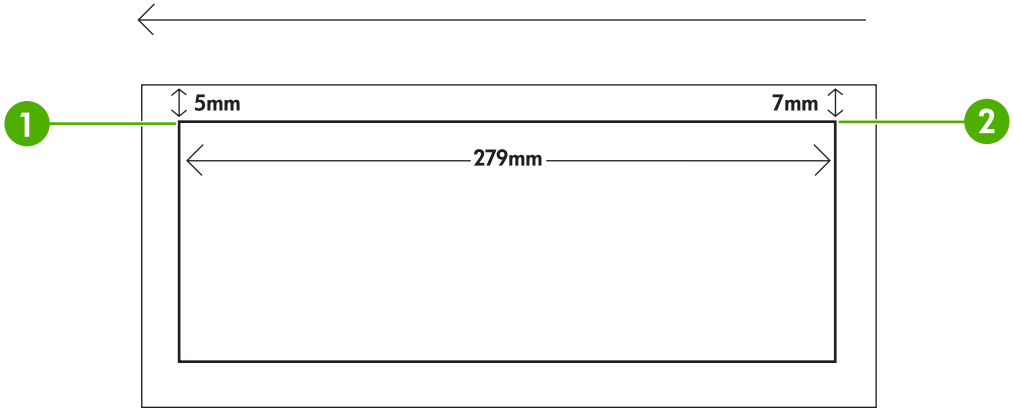
The ADF skew specification determines what is considered acceptable printed image placement on a page when making copies using the ADF. The specification is <= 1% of skew over the total length of the page.

For example, if the length of media is 200 mm, the maximum allowable skew is 2 mm.

To measure skew when feeding from the ADF, locate two points (points 1 and 2) as far apart as possible on one of the longer sides of the copied document. It is easiest if the document has a printed margin on it. Measure the distance between point 1 and point 2, and then multiply the distance by the maximum skew percentage (1%) to obtain the target specification. Then measure the

distance from point 1 to the edge of the media and point 2 to the edge of the media. If the difference between these to values is less than or equal to the target specification, the amount is within specifications. In the following example, the difference of 2 mm is considered within specifications.

**Figure 4-4** ADF skew example




The following actions can prevent additional skew when feeding from the ADF:

- Adjust the ADF paper guides until they fit snugly against the media.

- Verify that the ADF input tray is properly seated and aligned. The plastic tabs that keep the tray in place might be broken.
- When copying a stack of paper, make sure the paper is neatly stacked before placing it in the ADF input tray. Avoid excessive offset between sheets.
- Avoid feeding originals that have folded corners, especially the corners on the leading edge of the original.
- Make sure the original is in good condition and is not folded or bent. If originals are not in good condition, use the flatbed scanner.
- Do not lean on the ADF while copying. This may shift the media being fed through the ADF, creating image skew.
- Make sure the original to be copied is not already skewed.
- Inspect the input trays and make sure the media guides are snug against the paper.

## Scanner

If the scanner fails, it can be replaced as a whole-unit replacement part. The scanner replacement part does not include the ADF or the control panel.

The scanner is a carriage-type platen scanner, which includes the frame, glass, an internal power-supply, a scanner-controller PCA, and internal electronics and firmware. The ADF and control panel are attached to the scanner assembly.

The scanner has a sensor that detects whether the scanner lid is open or closed.

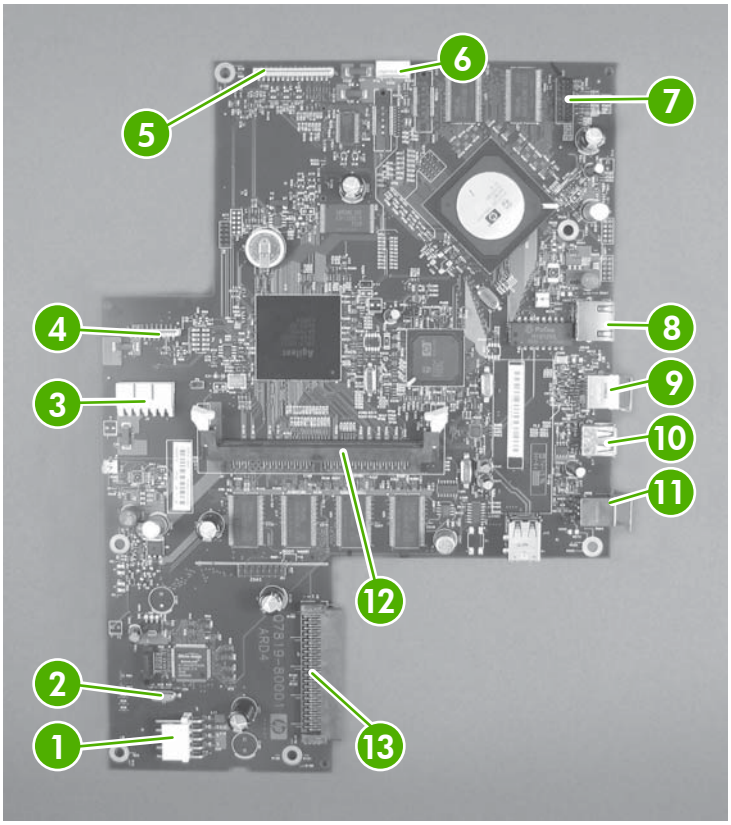
## Formatter

The formatter is responsible for the following actions:

- Controlling the ADF/scanner assembly (including the Copy Processing Board)
- Formatting and controlling copies
- Receiving and processing print data from the computer interface
- Monitoring the control panel and relaying device status information
- Developing and coordinating data placement and timing with the print engine

Figure 4-5 Formatter connections on page 67 shows the formatter connections.

**Figure 4-5** Formatter connections




| | | | |
|---|---|---|---|
| 1 | Disk drive power | 8 | Network port |
| 2 | Disk drive interface | 9 | FIH port |
| 3 | ECU power (DC controller) | 10 | Type A Hi-Speed USB 2.0 connection for adding accessories |
| 4 | ECU interface (DC controller) | | |
| 5 | ADF/scanner interface (FFC connector) | 11 | Type B Hi-Speed USB 2.0 port |
| 6 | Control panel interface | 12 | DIMM slot |
| 7 | Fax accessory interface | 13 | EIO connection |

## Engine control unit (ECU)

**NOTE:** The ECU is also known as the DC controller.

The ECU coordinates all device functions, according to commands that the formatter sends. It drives the laser/scanner system, the image formation system, and the pickup/feed/delivery system.

The ECU contains the following components:

- Engine-controller PCA
- Low-voltage PCA

Figure 4-6 Print engine general structure on page 68 shows the relationship of the ECU to the pickup/feed/delivery system, the laser/scanner system, and the image-formation system. Figure 4-7 Engine control unit circuit diagram on page 68 provides the ECU circuit diagram. Figure 4-8 LVPS circuit diagram on page 69 shows the low-voltage power supply circuit on the ECU.

**Figure 4-6** Print engine general structure

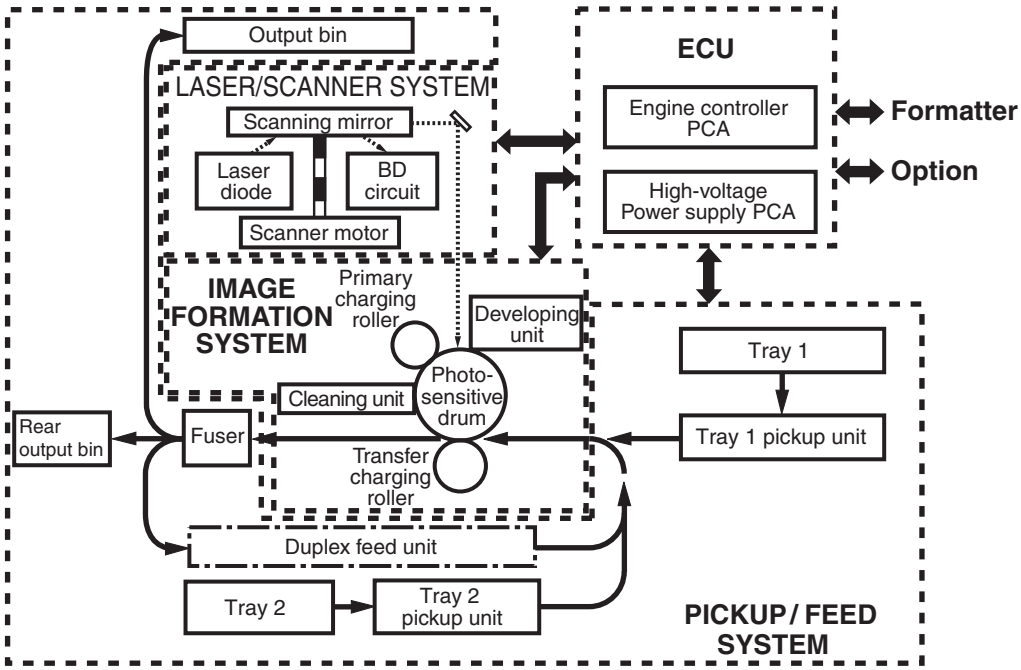
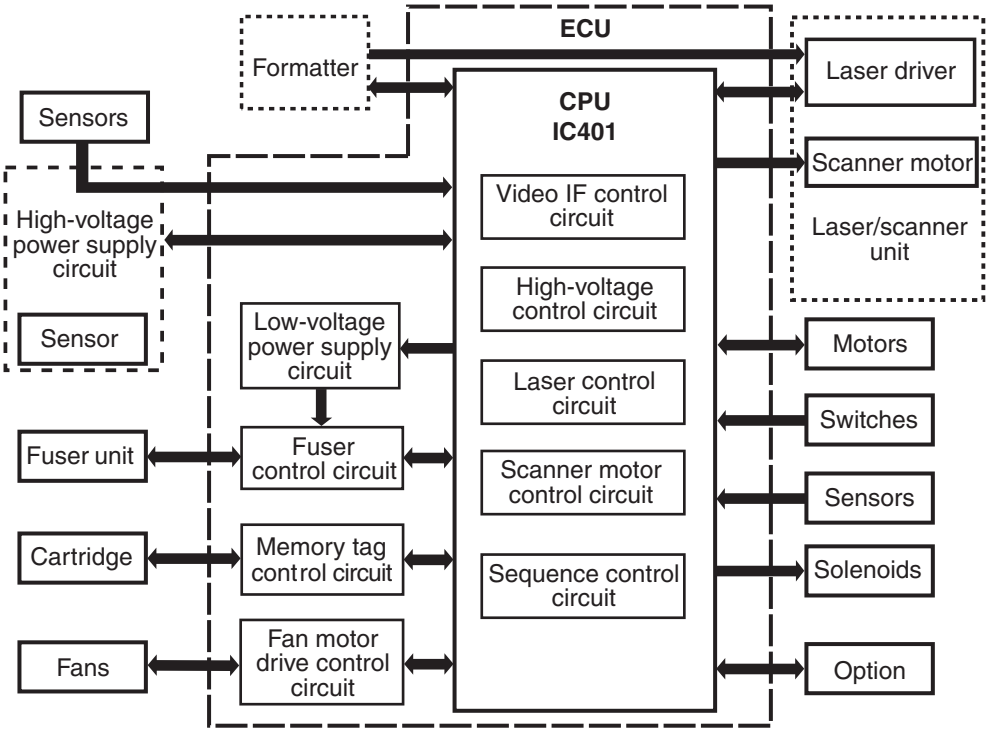
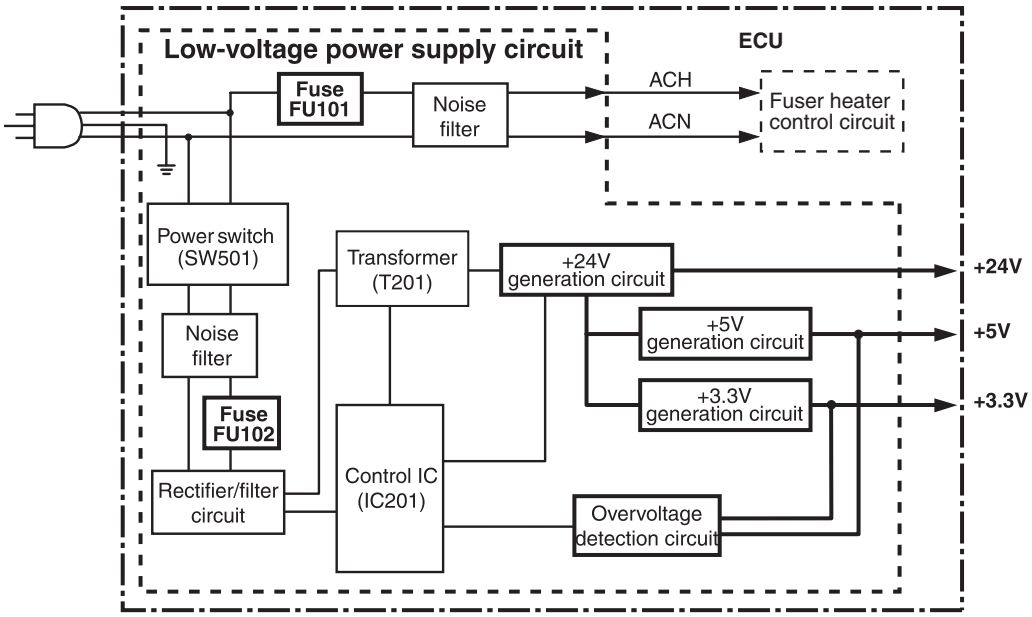



**Figure 4-7** Engine control unit circuit diagram




**NOTE:** Figure 6-10 ECU connections on page 293 shows the ECU connections.

**Figure 4-8** LVPS circuit diagram



# Pickup/feed/delivery system

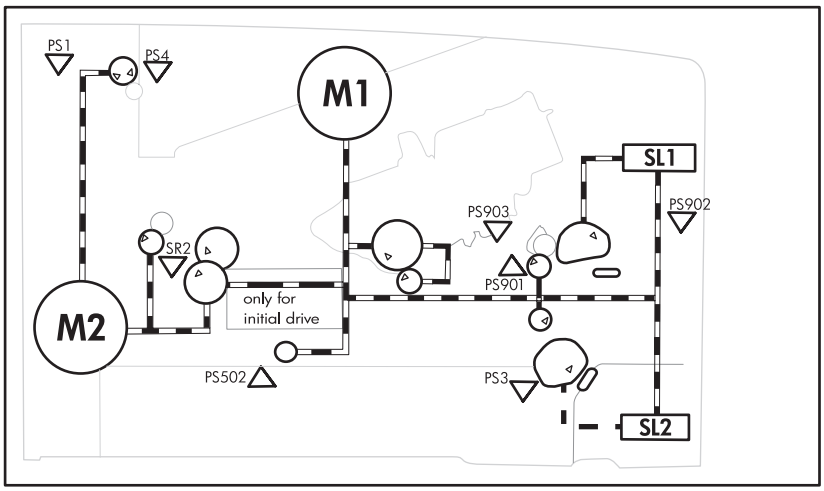
The pickup/feed/delivery system consists of several types of feed rollers and sensors. The ECU uses two motors and two solenoids to drive the rollers. Three media-detection sensors detect media as it passes through the device. If media does not reach or pass each sensor within a specified time period, the ECU determines that a jam has occurred and alerts the formatter.

## Pickup and feed components

The following components work together to feed media through the device:

- M1, main motor
- M2, fuser motor
- SL1, tray 1 pickup solenoid
- SL2, tray 2 pickup solenoid
- PS502, duplexer media-detection sensor
- Output-bin-full sensor
- PS901, top-of-page sensor
- PS902, tray 1 media-detection sensor
- PS903, media-width sensor
- SR1, top output-bin delivery flag
- SR2, fuser-delivery flag

**Figure 4-9** Pickup/feed/delivery system block diagram

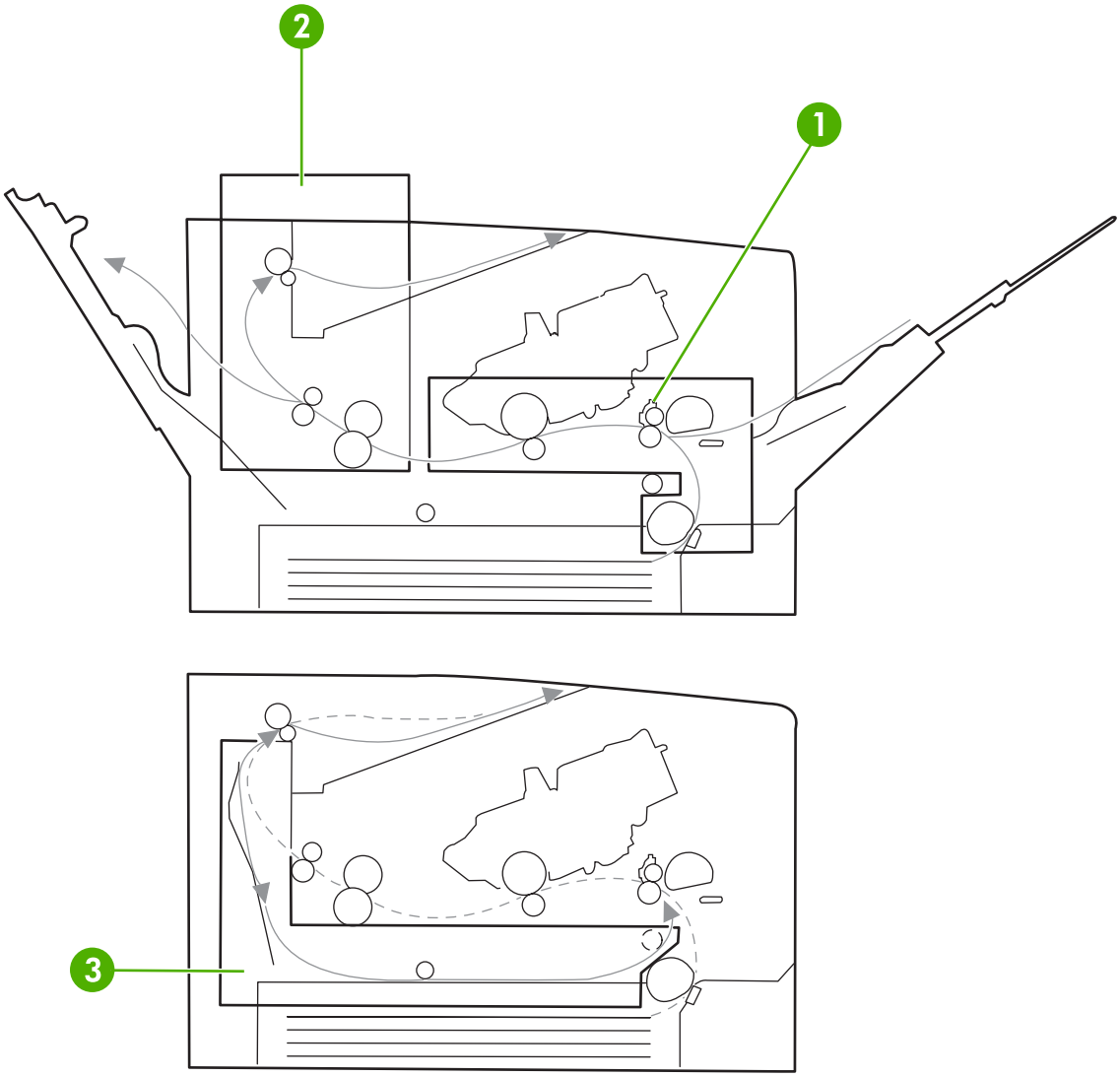



[INITIAL DRIVE ONLY] The fuser motor might not have enough torque to start the fuser if lubrication has evaporated over time. This can make the fuser more difficult to turn, especially near the end of the life of the product. The linkage to the main motor is called the Main Motor Assist. The basic principle is that the very strong main motor will overcome the initial static friction of the fuser by rotating the fuser at 1/5 of its normal speed for about one second. After the one second elapses, the fuser drive motor (M2) is turned on at full speed. There is a one-way clutch to prevent the fuser drive motor from coupling with the rest of the gear train.

## Pick-up/feed/delivery blocks

The pick-up/feed/delivery system is broadly divided into the following three blocks:

**Figure 4-10** Jam sensors




| | |
|---|---|
| 1 | Pick-up/feed unit (from each pick-up slot to the fixing unit inlet) (face-up delivery) |
| 2 | Fixing/Delivery unit (from the fixing unit to the delivery slot) (face-up delivery) |
| 3 | Duplex feed unit (from the duplex feed path to the duplex pick-up slot) (face-down delivery) |

## Pick-up/feed unit

The pick-up/feed unit picks up the paper one-by-one from the cassette or the multipurpose pick-up slot and feeds it to the fixing unit.

### Casette pick-up

The following actions occur during cassette pick-up:

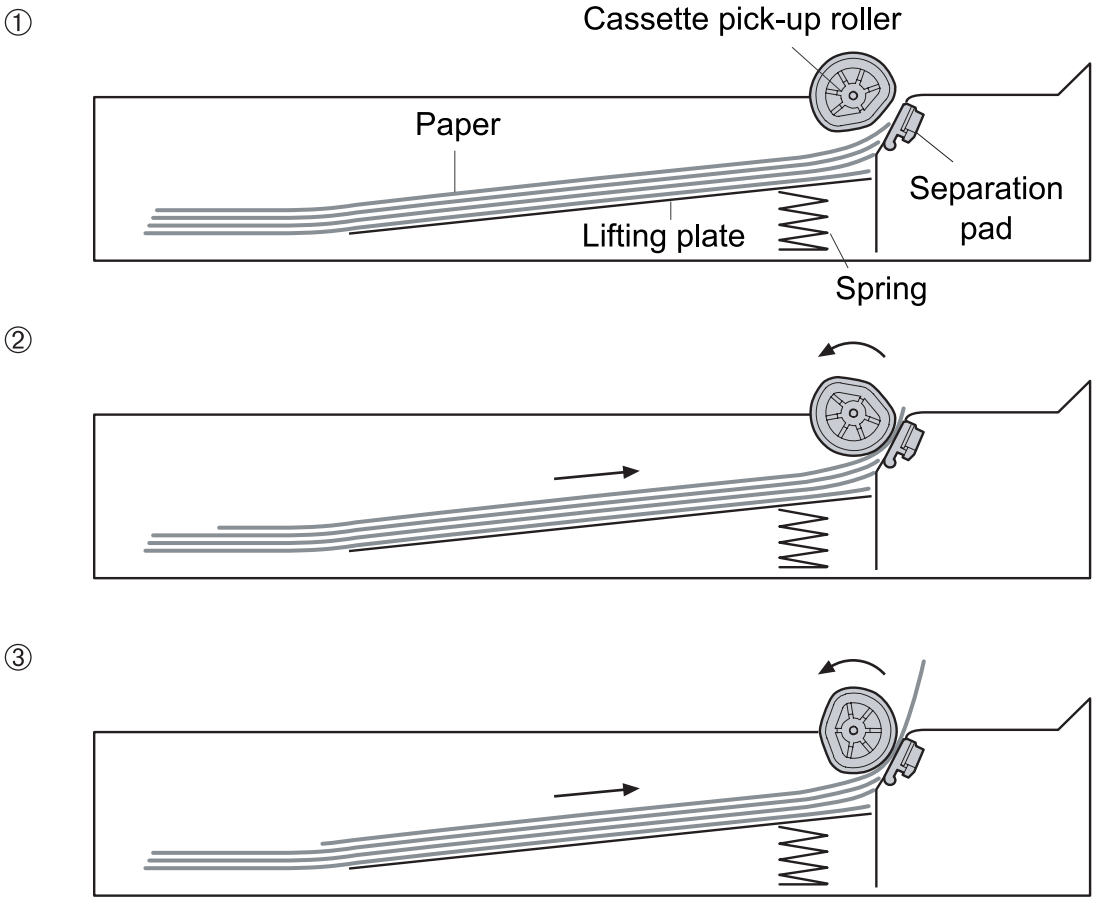
1. The engine controller rotates the main motor (M1) when the Print command is received from the formatter.
2. When the initial rotation is ready, the cassette pick-up solenoid (SL2) is turned on for approximately 0.2 seconds. The rotation of the main motor is transmitted to the pick-up roller.

> **NOTE:** Initial rotation is ready when the fixing-unit temperature reaches a specified temperature and the scanner motor reaches a specified rotation count.

3. The lifting plate positions the paper in the correct position. The edge of the loaded paper in the cassette is aligned with the inclined inner wall. This incline, called inclined wall separation, makes it easier for sheets to be picked individually.
4. One sheet of paper is picked up by the pick-up roller rotation and fed into the MFP. At this time, any multi-fed paper is removed by the inclined wall separation and the pad separation.

The diagram below shows the inclined wall separation and the pad separation.

**Figure 4-11** Inclined wall separation and pad separation



### Multipurpose tray pick-up

The multipurpose tray paper-detection sensor detects when paper is set in the multipurpose tray. Pad separation is utilized to prevent a multi-feed of paper.

The multipurpose tray pick-up operation is described in the following procedure:

1. The engine controller rotates the main motor (M1) when the Print command is received from the formatter.
2. When the initial rotation is ready, the multipurpose tray pick-up solenoid (SL1) is turned on for approximately 0.14 seconds. The rotation of the main motor is transmitted to the multipurpose tray pick-up roller.
3. The paper is picked up and fed into the MFP by the rotation of the multipurpose tray pick-up roller. At this time, any multi-fed media is removed by the separation pad.

### Paper feed

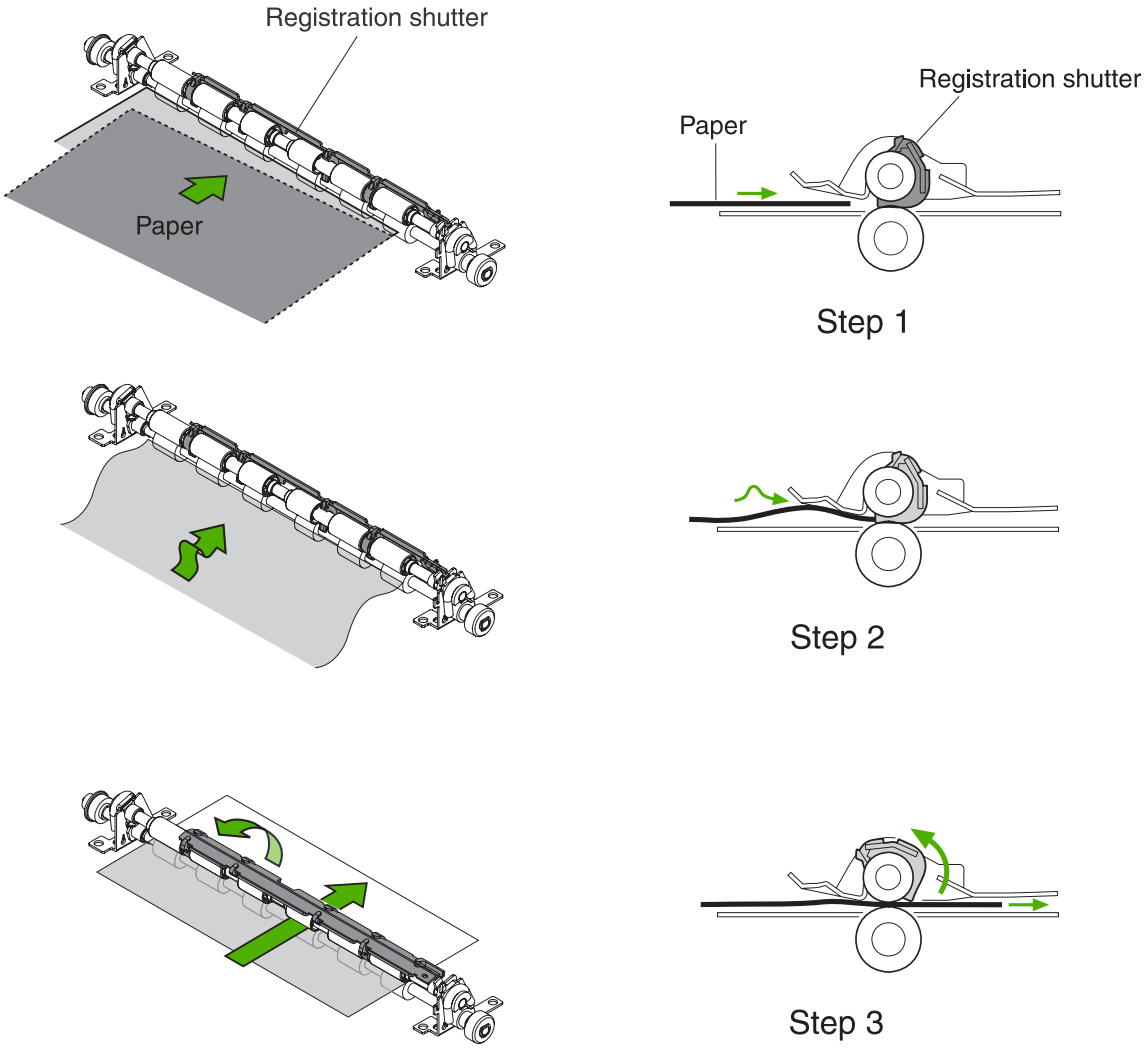
The paper-feed operation is described in the following procedure.

1. As media is fed into the MFP, the registration shutter compensates for the skew feeding.
2. Toner is transferred to the media from the photosensitive drum, and then the media is fed to the fixing/delivery unit.

The following procedure describes the skew correction performed by the registration shutter.

1. After media is fed to the registration roller unit, the registration shutter compensates for the skew feeding.
2. The media is warped because the registration shutter is held with springs and is not opened unless force is applied.
3. The force of the media being warped lifts the shutter and the paper proceeds.

**Figure 4-12** Skew correction




## Fixing/delivery unit

The fixing/delivery unit fixes toner on the media and delivers it to the delivery tray. The operation of the fixing/delivery unit is as follows:

1. The engine controller rotates the main motor within a prescribed period of time after the formatter sends the Print command.
2. After another prescribed period of time, the engine controller rotates the fixing motor. The pressure roller is driven by the main motor at 1/5 speed.
3. The pressure roller is driven by the fixing motor switched from the main motor through the one-way gear. The fixing motor rotates the pressure roller and the feed rollers at regular speed.

**NOTE:** The main motor drives the pressure roller only during the initial drive.

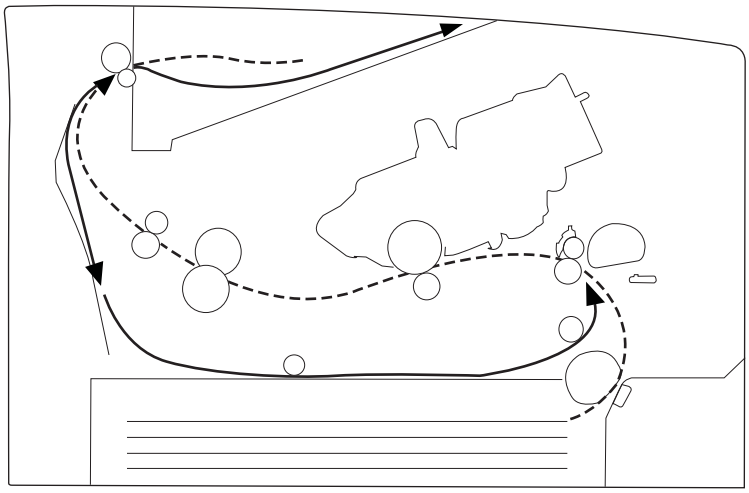
4. Toner is fused to the paper by the fixing film and the pressure roller.
5. The paper delivered from the fixing unit is delivered to the face-down tray or the face-up tray.

### Duplex feed unit

This MFP performs duplex printing by turning the paper upside down.

The duplex paper path is shown in the following illustration:

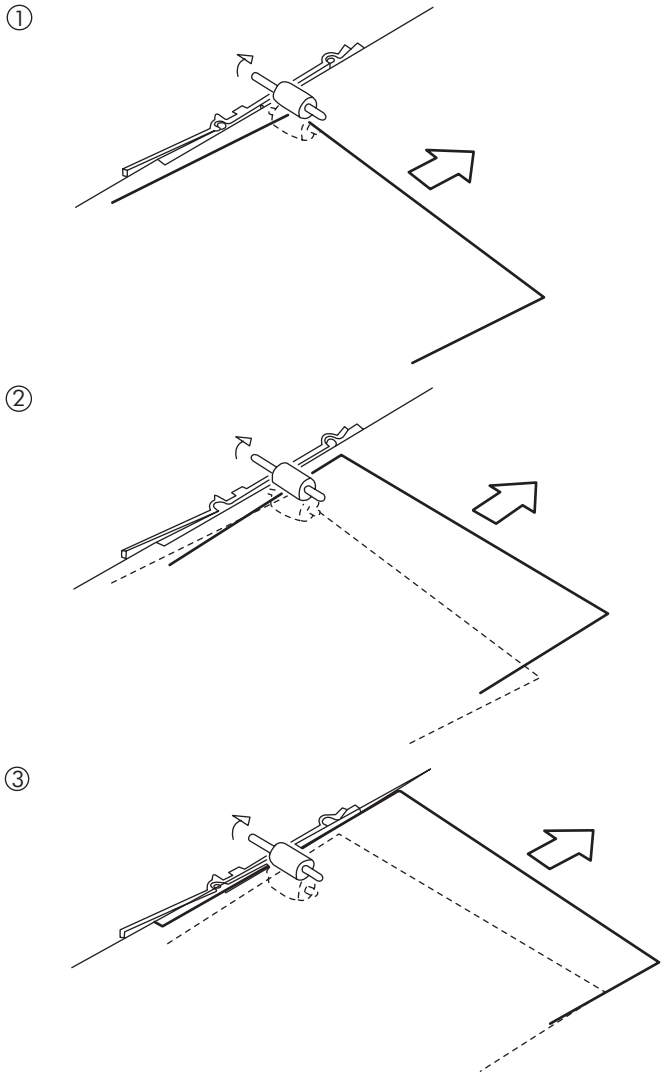
**Figure 4-13** Duplex paper path



The duplex feed unit is driven by the main motor. After the first side of the media is printed, the paper is fed to the face-down tray. The engine controller reverses the fixing motor approximately 0.18 seconds after the delivery sensor (SR2) detects the trailing edge of paper. The delivery roller is reversed, and the paper is pulled back into the duplex feed unit.

The duplex feed unit has an oblique roller and standard plate. As the shaft of the oblique roller is slanted off the feeding direction, the edge of the media is pushed against the plate. This aligns the paper and compensated for skew feeding. The paper is fed to the registration roller from the duplex feed unit. Then the second side of the media is printed and the media is delivered to the face-down tray.

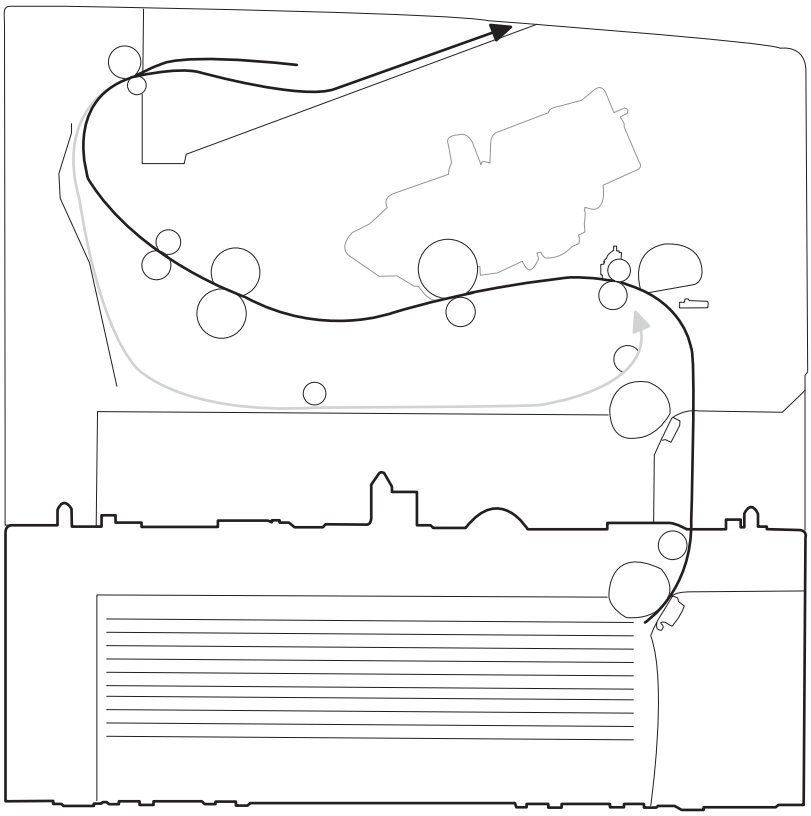
**Figure 4-14** Duplex skew correction




## Optional tray 3 paper path

The optional tray 3 picks media loaded into the cassette and feeds it to the printer. The paper path is illustrated below.

**Figure 4-15** Duplex skew correction

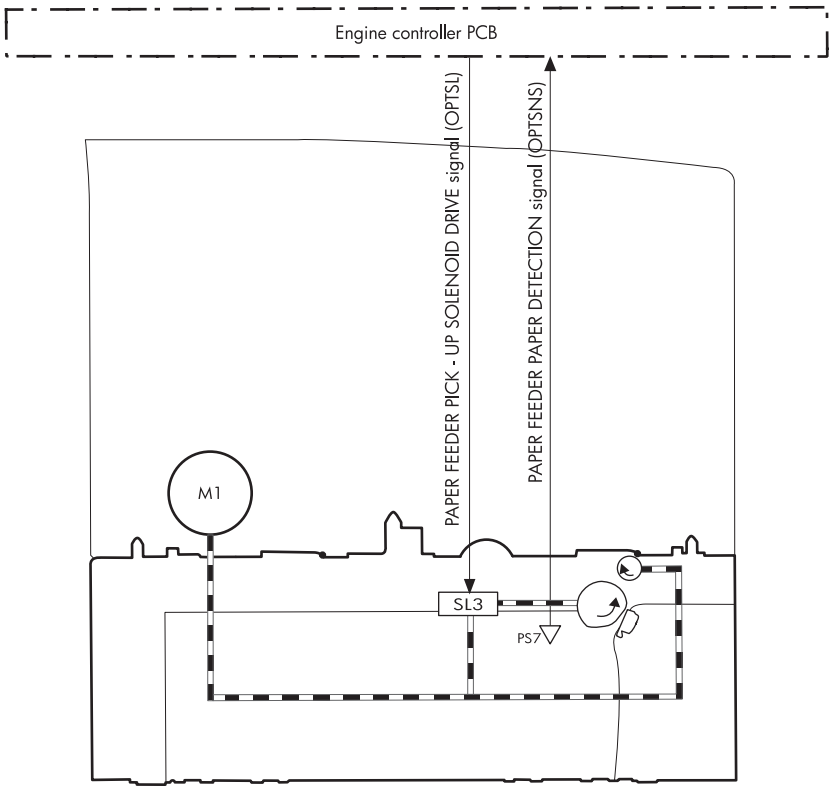


The engine controller PCB in the printer controls the operational sequence of the paper feeder. The engine controller PCB drives the paper feeder pick-up solenoid using the correct timing and monitors the sensors verify the status of the paper feeder. The paper feeder is supplied with +24VDC of power from the printer.

The pick-up/feed operation of the optional tray 3 is described as follows:

1. When the scanner motor reaches the specified rotation-count, the engine controller PCB turns on the paper feeder pick-up solenoid (SL3). The paper feed pick-up roller then contacts the surface of the media and feeds it from the optional tray 3 into the printer one by one.
2. The paper is then fed to the specified output tray after passing through the transfer, separation, fusing, and delivery processes.

**Figure 4-16** Duplex skew correction

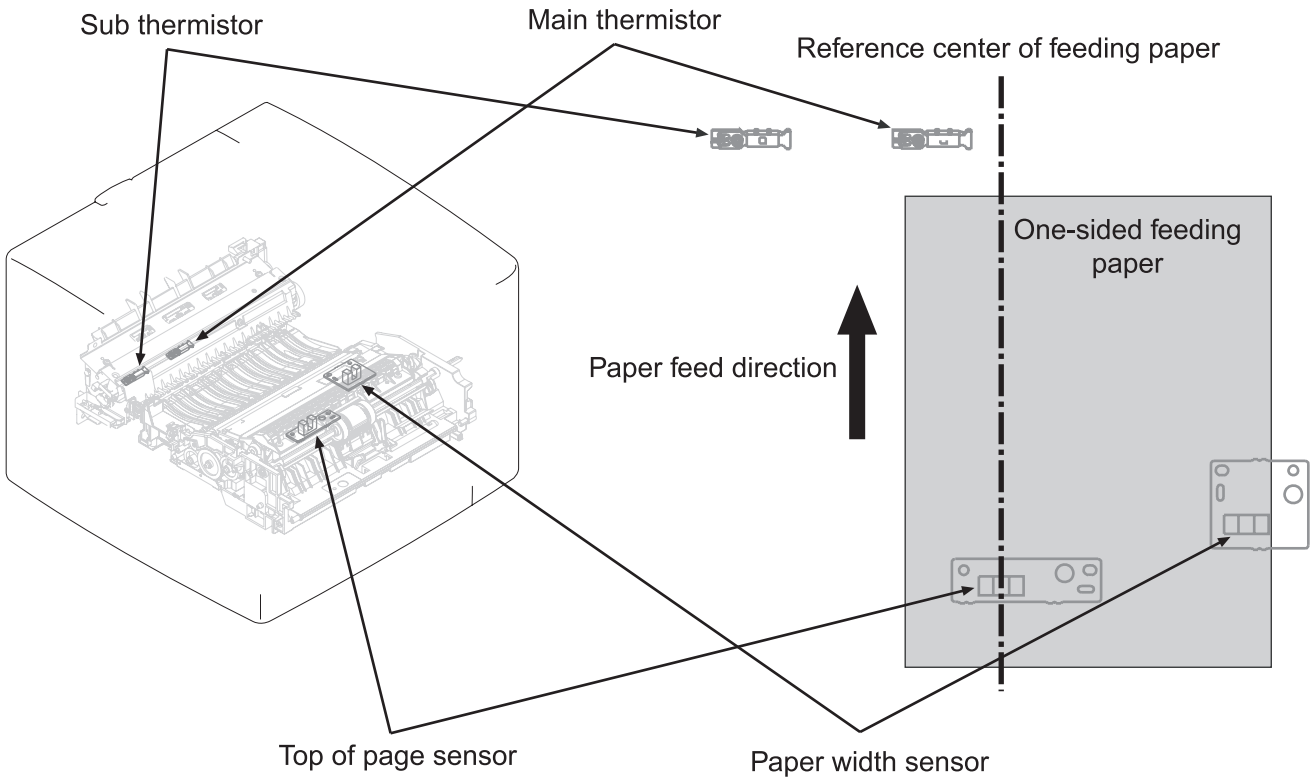



## Media-width detection

The media-width sensor automatically detects the media width for media that is 210 mm (8.27 inches) or wider.

When media narrower 210 mm (8.27 inches) is fed, the media-width sensor is not activated. Because the narrow media doesn't dissipate enough heat for the fuser, a protection mechanism must be triggered to protect the fuser from overheating. This protection mechanism slows down the print process so that there is a gap between pages. However, this protection mechanism affects the throughput speed significantly. For example, if feeding Executive paper 267 mm (10.5 inches) wide, the pages-per-minute throughput is reduced to 17ppm.

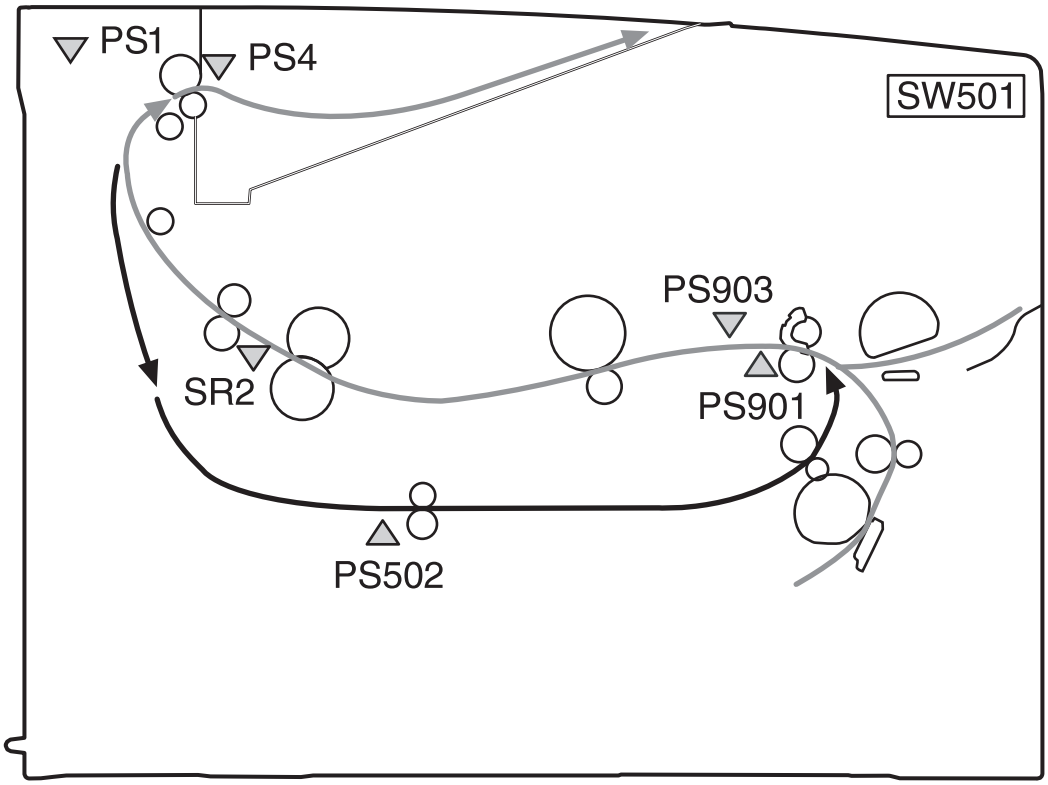
**Figure 4-17** Media-width sensor




## Jam detection

The following illustration shows the location of jam sensors in the MFP.

**Figure 4-18** Jam sensors




| Sensor | Jams detected |
|---|---|
| PS1 | Rear output bin sensor |
| PS4 | Delivery delay jam 2 |
| SR2 | Delivery delay jam 1 |
| | Delivery delay jam 2 |
| | Delivery stationary jam |
| | Residual paper jam |
| | Wrapping jam |
| PS502 | Duplex pickup jam |
| | Duplex reversing jam |
| | Residual paper jam |
| PS901 | Delivery delay jam 1 |
| | Delivery stationary jam |
| | Pick-up delay jam |
| | Pick-up stationary jam |
| | Residual paper jam |
| | Wrapping jam |

| Sensor | Jams detected |
|---|---|
| PS903 | Residual paper jam |
| SW501 | Door open jam |

The following list describes the various types of jams

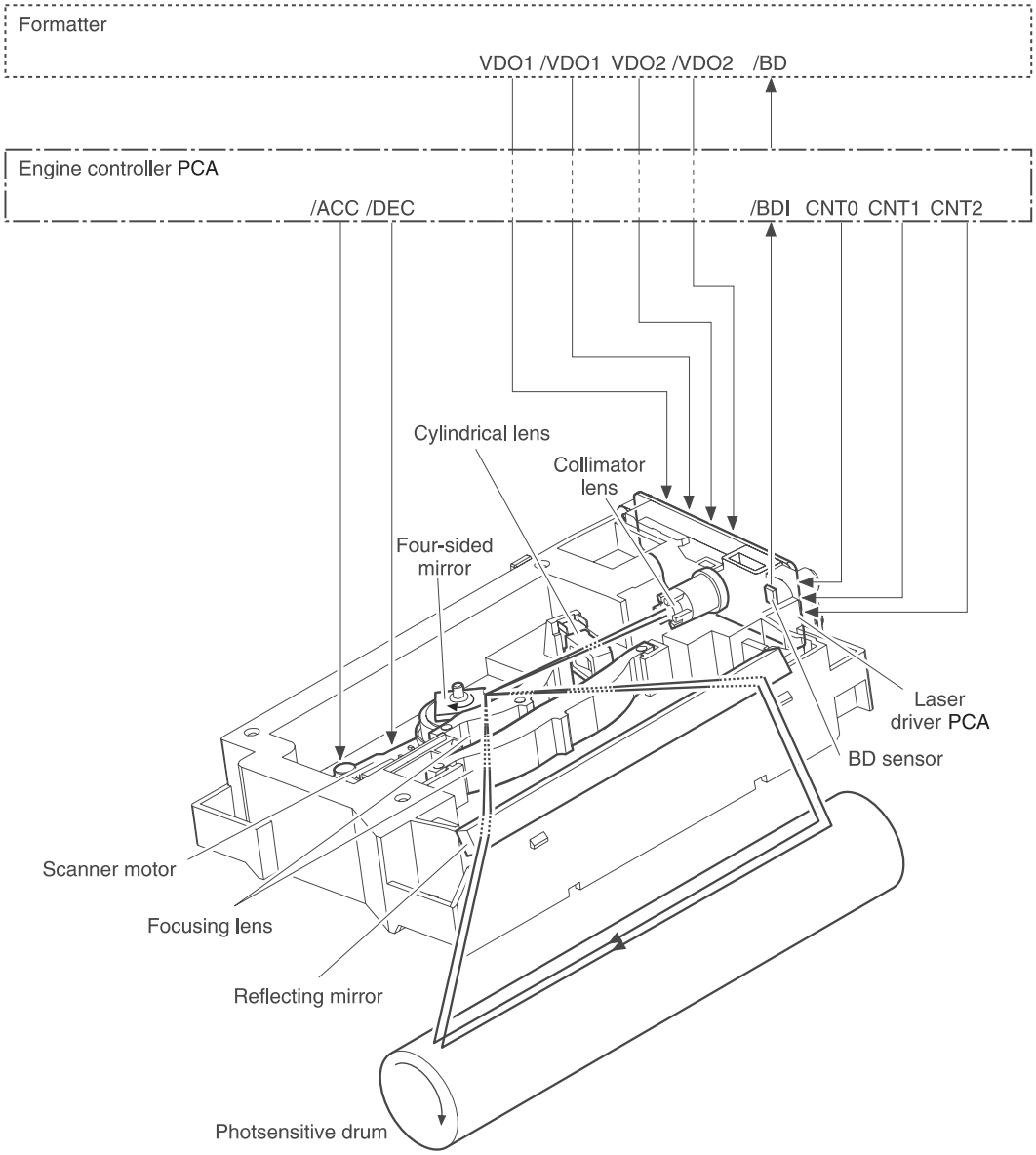
- **Pick-up delay jam**: When the top of page sensor (PS901) does not detect the leading edge of the paper within a prescribed period of time after the pick-up operation started, the CPU retries the pick-up operation. During the multi-purpose tray pick-up, it retries once. and during the cassette and option pick-up, it retries twice. Then, if the top of page sensor (PS901) does not detect the leading edge again within a prescribed period of time, the CPU determines a pick-up delay jam.
- **Pick-up stationary jam**: occurs when the top of page sensor (PS901) does not detect the trailing edge of the paper within approximately. 1.3 seconds after it detects the leading edge.
- **Delivery delay jam**: occurs when the delivery sensor (SR2J) does not detect the leading edge of the paper within approximately 1.3 seconds after when the top of page sensor (PS901) detects the leading edge.
- **Wrapping jam**: occurs when the delivery sensor (SR2) does not detect the trailing edge of the paper approximately 0.8 seconds after the top of page sensor (PS90l) detected the trailing edge.
- **Delivery stationary jam**: occurs when the delivery sensor (SR2) does not detect the trailing edge of the paper within approximately 1.3 seconds after the top of page sensor (PS901) detected the trailing edge.
- **Residual paper jam**: occurs when the top of page sensor (PS901), the delivery sensor (SR2), or the duplex sensor (PS2) detects the paper after the initial rotation has started.
- **Duplex reversing jam**: occurs when the duplex sensor (PS2) does not detect the leading edge of the paper approximately 1.8 seconds after the reversing process is started.
- **Duplex pick-up jam**: occurs when the duplex sensor (PS2) does not detect the trailing edge of the paper approximately 2.02 seconds after it detects the leading edge.
- **Door open jam**: occurs when an open door is detected during the print operation.

**NOTE:** If the top of page sensor (PS901) detects media before the pick-up operation has begun, then the high-voltage system, laser/scanner, and fusing heater are immediately stopped and the media is delivered to the output tray.

## Laser/scanner system

The laser/scanner system receives video signals from the ECU and the formatter and converts the signals into latent images on the photosensitive drum.

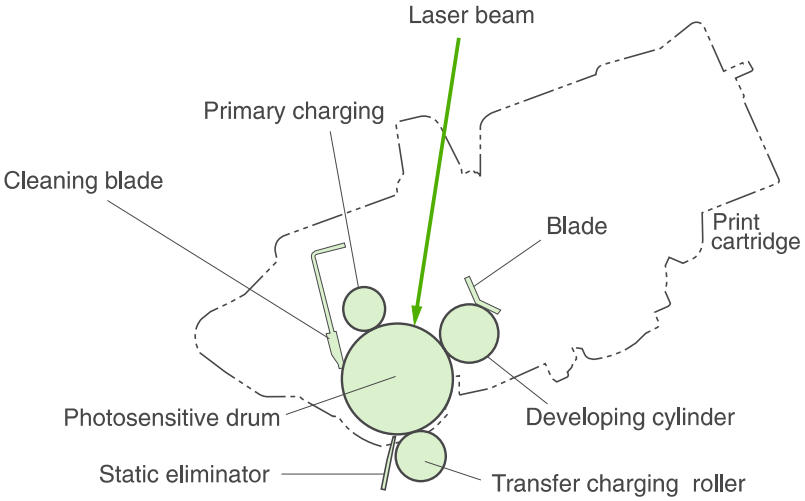
**Figure 4-19** Laser/scanner system



## Image-formation system

Laser printing requires the interaction of several different technologies, including electronics, optics, and electrophotographics, to provide a printed page.

**Figure 4-20** Print cartridge diagram

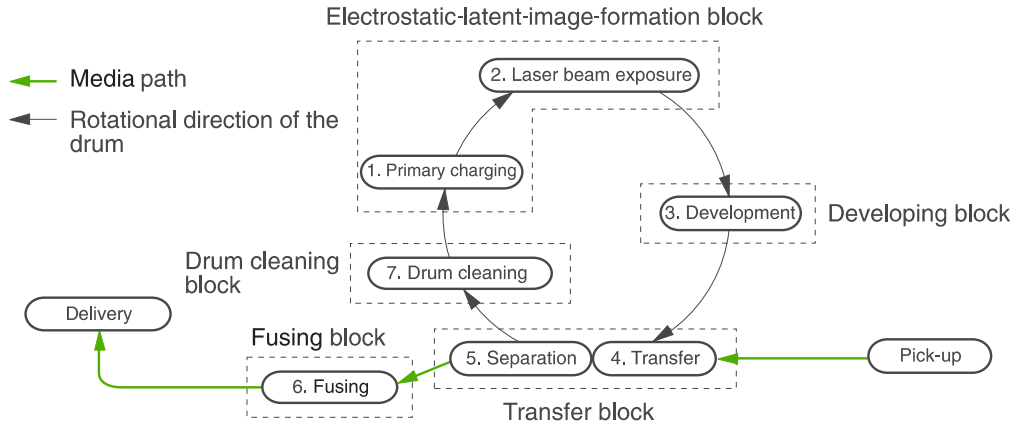



Each process functions independently and must be coordinated with the other device processes. Image formation consists of the following five processes:

- Electrostatic latent-image formation
- Developing
- Transfer
- Fusing
- Drum cleaning

The five processes contain eight steps, which are shown in the figureFigure 4-21 Image-formation system on page 83 and described in the following sections.

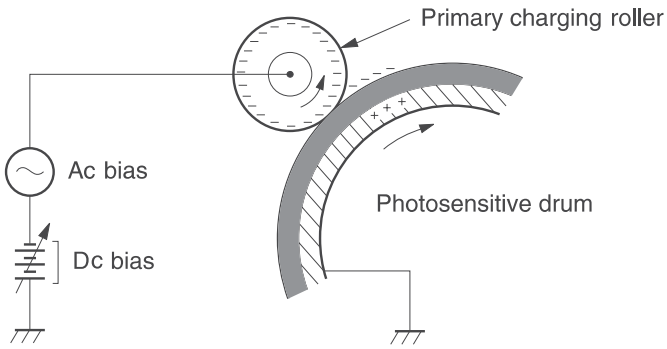
**Figure 4-21** Image-formation system



## Step 1: Primary charging

Dc and ac biases are applied to the primary charging roller, which transfers a uniform negative potential to the photosensitive drum.

**Figure 4-22** Primary charging




## Step 2: Laser beam exposure

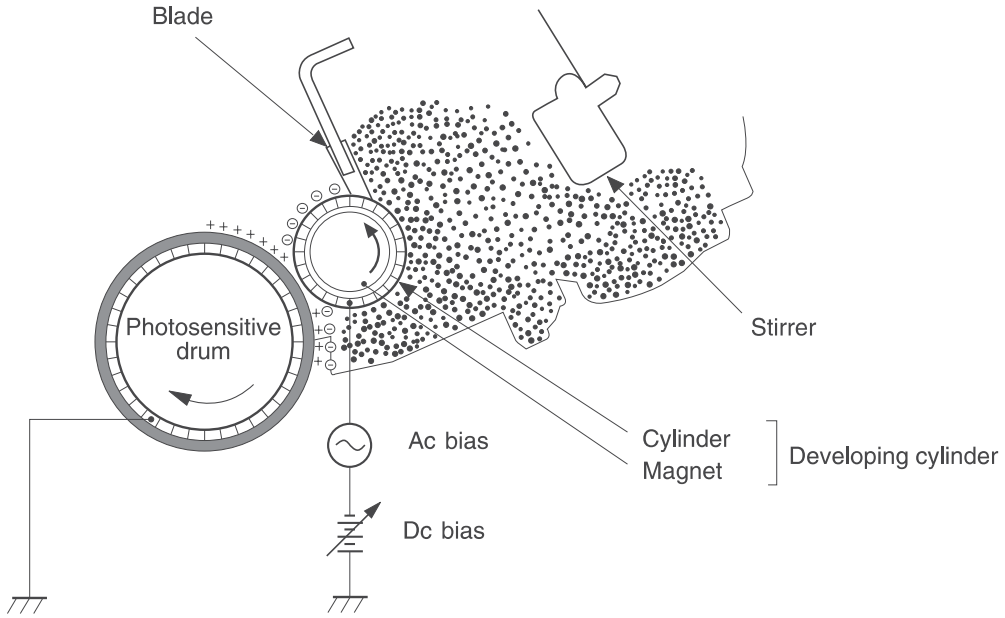
The laser beam scans the photosensitive drum to neutralize negative charges on parts of the drum. An electrostatic latent image is formed on the drum where negative charges were neutralized.

## Step 3: Developing

The developing cylinder comes in contact with the photosensitive drum to deposit toner onto the electrostatic latent image.

**NOTE:** The charges on the exposed area of the drum are shown as positive in Figure 4-23 Developing on page 84. The charges are actually negative, but they are more positive than the charges on the developing cylinder.

**Figure 4-23** Developing

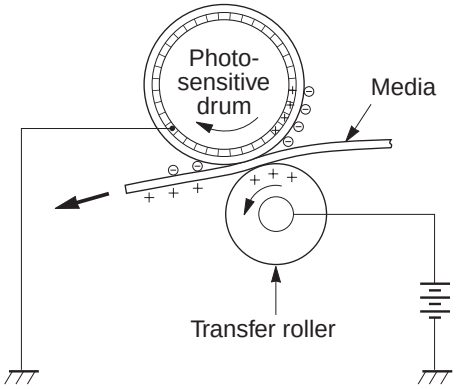


Toner acquires a negative charge through friction from the developing cylinder and the blade. When the negatively charged toner comes in contact with the drum, the toner adheres to the electrostatic latent image. The image on the drum becomes visible because of the toner.

## Step 4: Transfer

The transfer charging roller, to which a dc positive bias is applied, imparts a positive charge on the print media. When the print media comes in contact with the photosensitive drum, the toner is transferred to the print media.

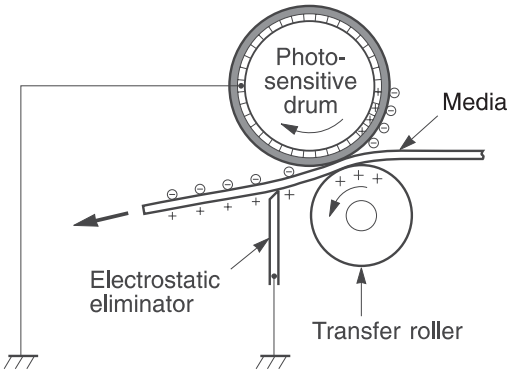
**Figure 4-24** Transfer




## Step 5: Separation

The elasticity of the print media causes its separation from the photosensitive drum. A static charge eliminator aids separation by weakening any electrostatic adhesion.

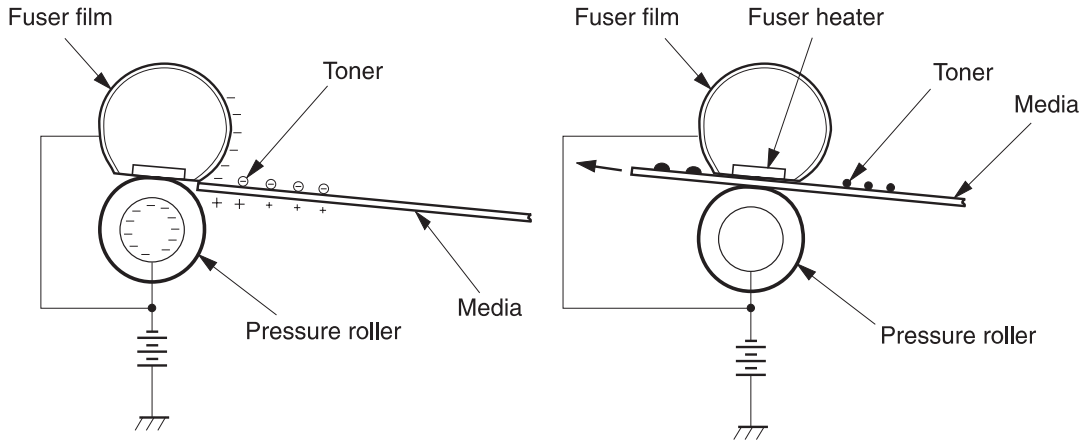
**Figure 4-25** Separation



## Step 6: Fusing

The dc negative bias applied to the fusing film strengthens the holding force of the toner on the print media and prevents the toner from scattering.

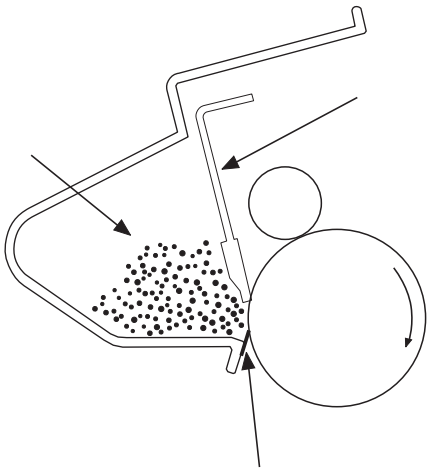
**Figure 4-26** Fusing




## Step 7: Drum cleaning

The cleaning blade scrapes the residual toner off of the photosensitive drum and deposits it into the waste toner case.

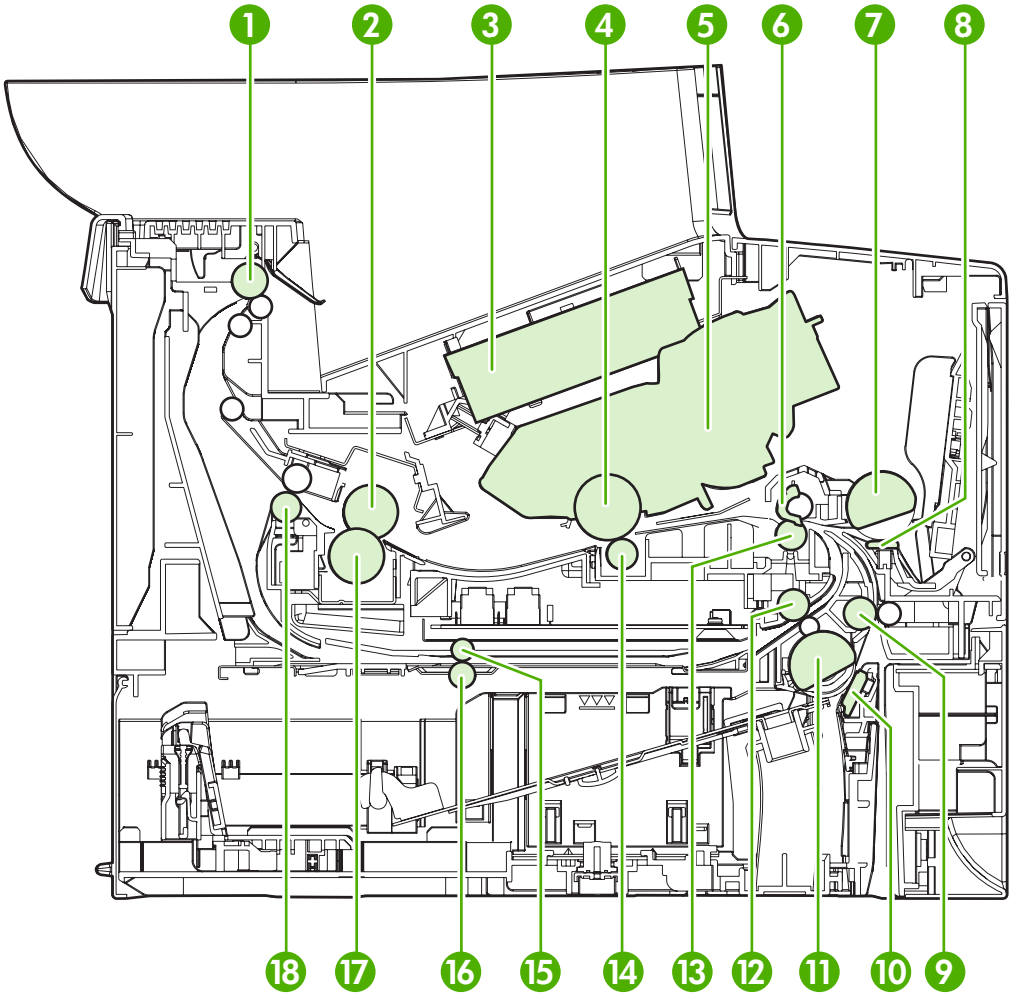
**Figure 4-27** Drum cleaning



# Internal components

Figure 4-28 Cross-section of device on page 87 highlights the major internal components.

**Figure 4-28** Cross-section of device




| | | | |
|---|---|---|---|
| 1 | Top output-bin delivery roller | 10 | Tray 2 separation pad |
| 2 | Fusing roller | 11 | Tray 2 pickup roller |
| 3 | Laser/scanner | 12 | Duplexer pickup roller |
| 4 | Photosensitive drum | 13 | Feed roller |
| 5 | Print cartridge | 14 | Transfer roller |
| 6 | Registration shutter | 15 | Duplexer feed roller |
| 7 | Tray 1 pickup roller | 16 | Oblique roller |
| 8 | Tray 1 separation pad | 17 | Fuser pressure-roller |
| 9 | Tray 2 feed roller | 18 | Fuser delivery-roller |

# Timing

The microprocessor on the ECU controls the device operation sequences. Table 4-1 Operation sequences on page 88 describes engine operations for each period of a print operation. Figure 4-29 Operational sequences on page 88 provides a graphical representation of the operation sequences. Table 4-2 Power-on sequence on page 90 describes each step of the power-on sequence. Table 4-3 Power-on sequence for the ADF/scanner assembly on page 91 describes the ADF power-on sequence.

**Table 4-1 Operation sequences**

| Name | Timing | Purpose |
|---|---|---|
| WAIT | From power-on until the end of the main motor initial drive | Detects presence of a print cartridge. Clears potential from the drum surface and cleans the transfer roller.<br><br>SeeTable 4-2 Power-on sequence on page 90 for a complete description of the WAIT (power-on) period. Also see Figure 4-30 Timing diagram, HP LaserJet M3027/M3035 on page 89 for detailed information about device timing. |
| STBY (standby) | From the end of the WAIT or LSTR period until either a print command is sent from the formatter or the power is turned off. | Prepares the device to receive print commands |
| INTR (initial rotation) | From the time of the print command until the pickup solenoid is turned on. | Prepares the photosensitive drum for printing. |
| PRINT | From the end of the INTR period until the top-of-page sensor detects the trailing edge of the media. | Forms the image on the photosensitive drum and transfers the toner image to the media. |
| LSTR (last rotation) | From the end of the PRINT period until the main motor stops rotating. | Delivers the last page of a print job.<br><br>After LSTR, the device either returns to STBY or, if another print command was sent from the formatter, enters INTR. |

**Figure 4-29** Operational sequences

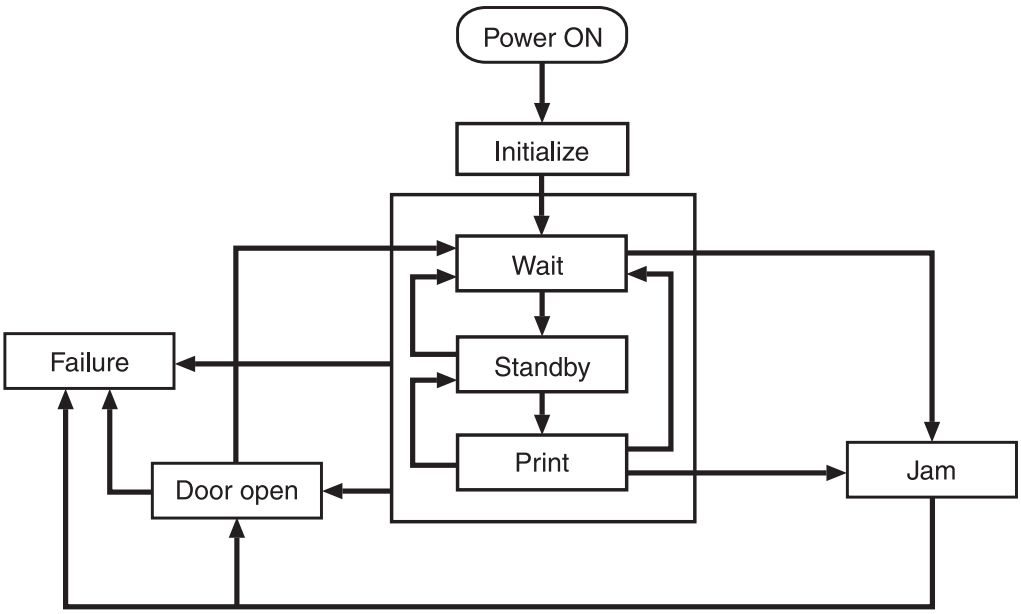



**Figure 4-30** Timing diagram, HP LaserJet M3027/M3035

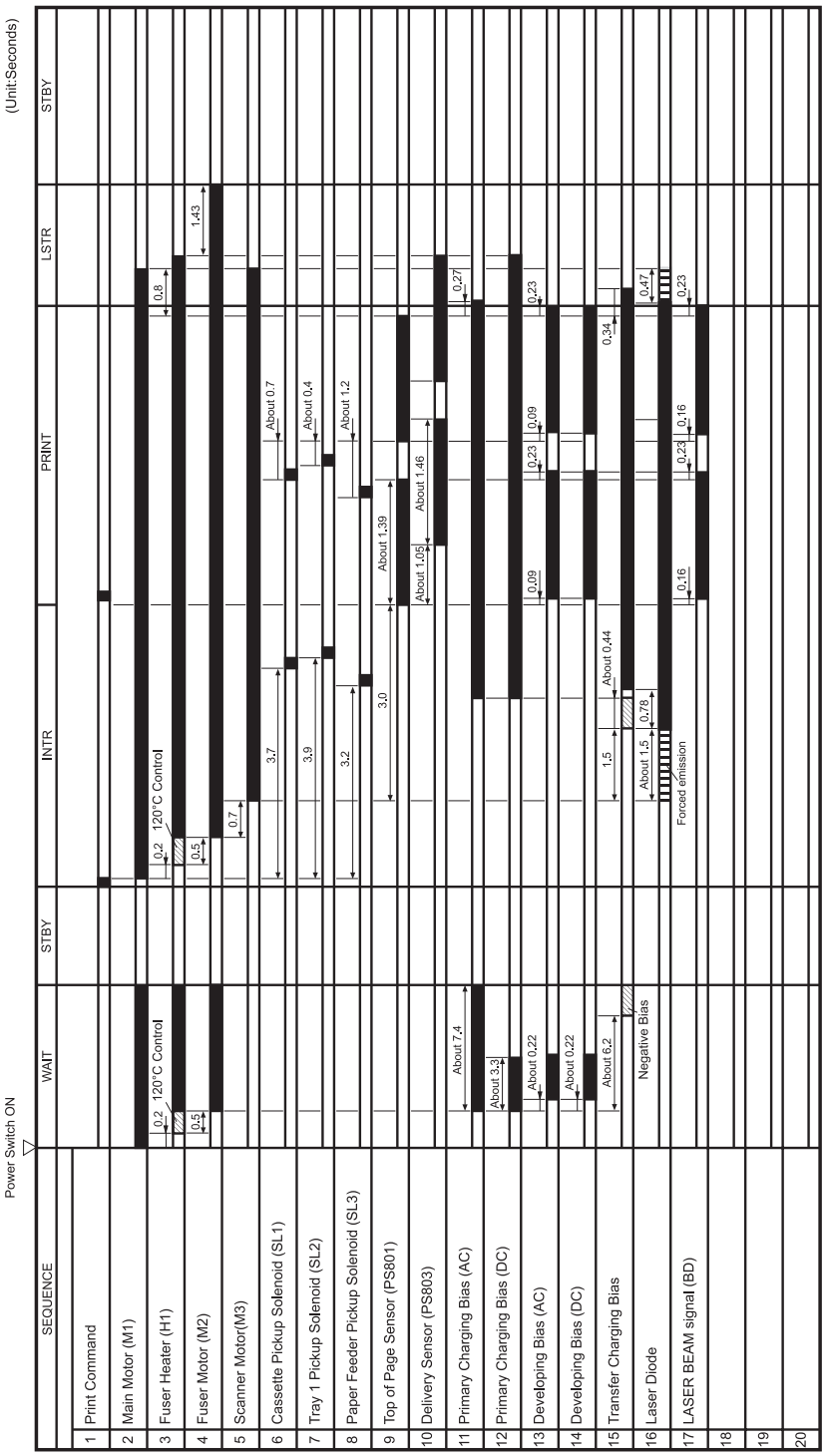



**Table 4-2 Power-on sequence**

| Step | Action |
|---|---|
| 1 | Power-on |

**Table 4-2 Power-on sequence (continued)**

| Step | Action |
|---|---|
| 2 | CPU initialization |
| 3 | Video-interface communication start |
| 4 | Sensors check for residual media |
| 5 | Main motor initial drive |
| 6 | Fuser heater initial drive. The fuser heater reaches a surface temperature of 120°C. |
| 7 | Fuser-motor initial drive |
| 8 | Laser/scanner-motor initial drive |
| 9 | High-voltage control<br>Detection of the presence of a print cartridge<br>Cleaning of the transfer roller after the primary charging ac bias is turned on |
| 10 | Failure/abnormality check: detection of laser/scanner failure, fuser failure, and open covers |
| 11 | Communication with the memory tag |

**Table 4-3 Power-on sequence for the ADF/scanner assembly**

| Step | Action |
|---|---|
| 1 | Power-on |
| 2 | Initialize ADF and jam check |
| 3 | Carriage-lock check |
| 4 | Lamp warm-up |
| 5 | Lamp-stability check |
| 6 | Find reference-mark (for scanner right-side-edge location) |
| 7 | AFE (analog front-end) |
| 8 | PRNU (photo-response non-uniformity) and DSNU (dark-signal non-uniformity) correction. This procedure is performed with the lamp on. The carriage moves under the white calibration strip. |

**NOTE:** The lamp profile changes after 10 minutes of non-use. The device again performs lamp warm-up and PRNU and DSNU correction.

# Print cartridge memory system

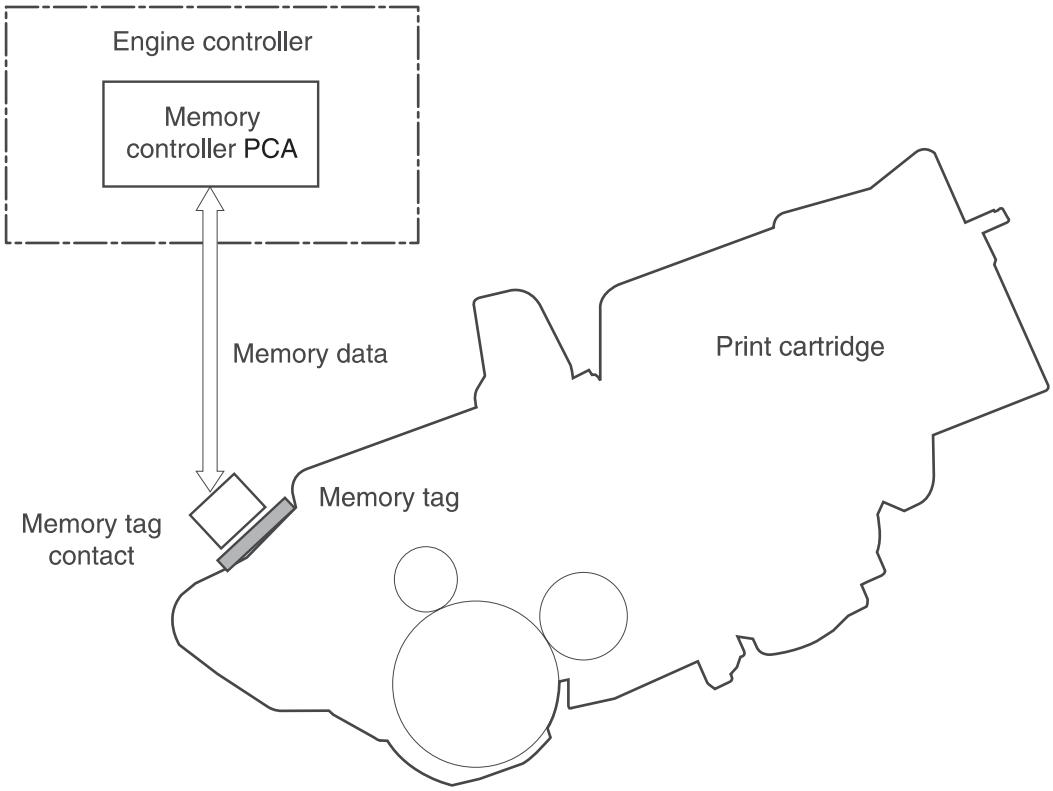
The memory tag is a nonvolatile memory built into the print cartridge. The cartridge usage condition is detected as the engine controller reads or writes the data stored on the memory tag. The engine controller renews the information in the prescribed timing and reads or writes it from or to the memory tag.

The engine controller commands the memory tag to read or write with the following conditions:

- **Read**
  - Power is ON
  - The top cover is closed
  - A command has been received from the formatter
- **Write**
  - A page of media is printed.
  - A command has been received from the formatter

When the engine controller failed to read or write three times in a row, it determines that the memory tag is abnormal and notifies the formatter of a "cartridge memory abnormality warning".

**Figure 4-31** Print cartridge memory tag



# Electrical structure

**Figure 4-32** Electrical structure (1 of 2)

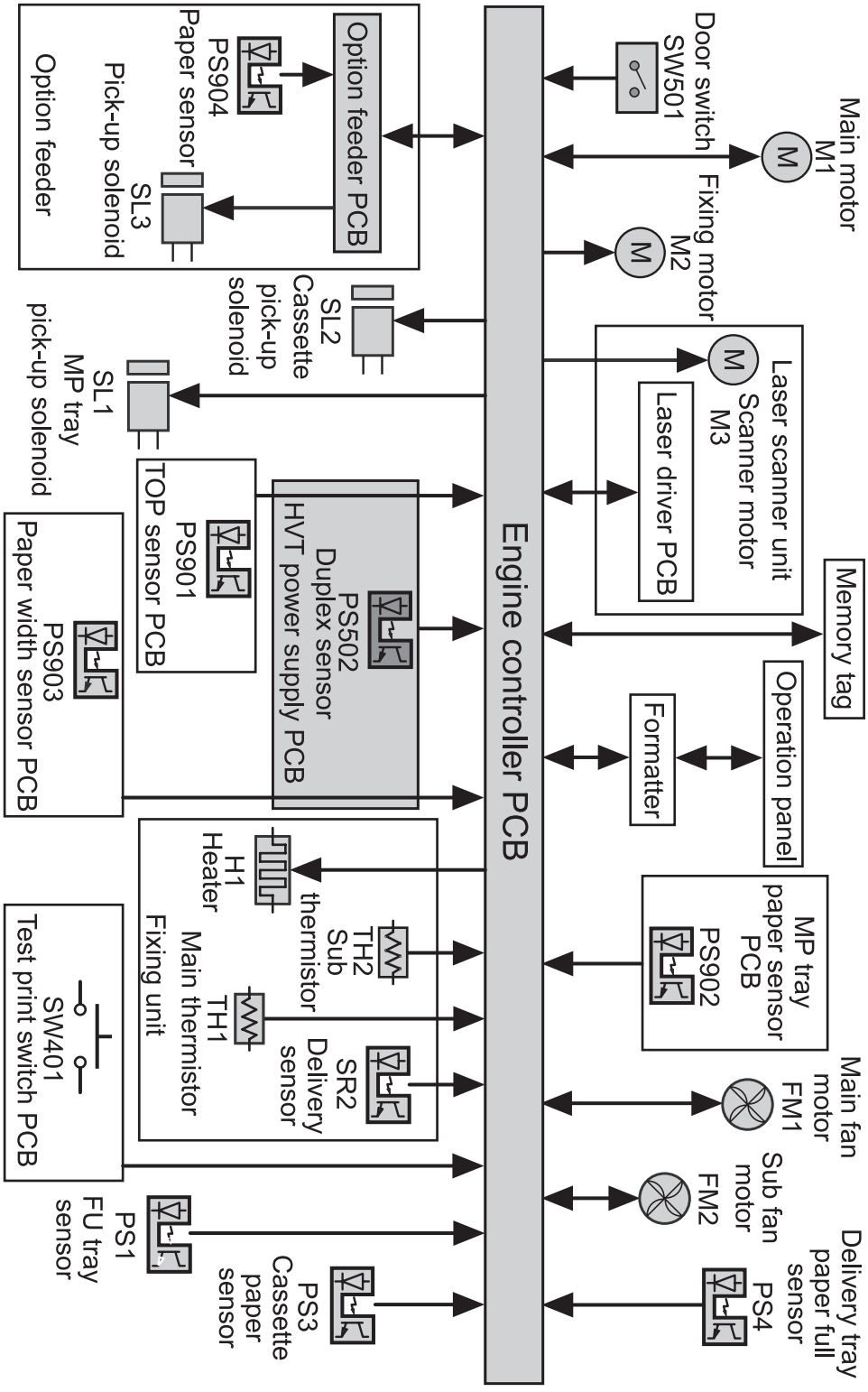
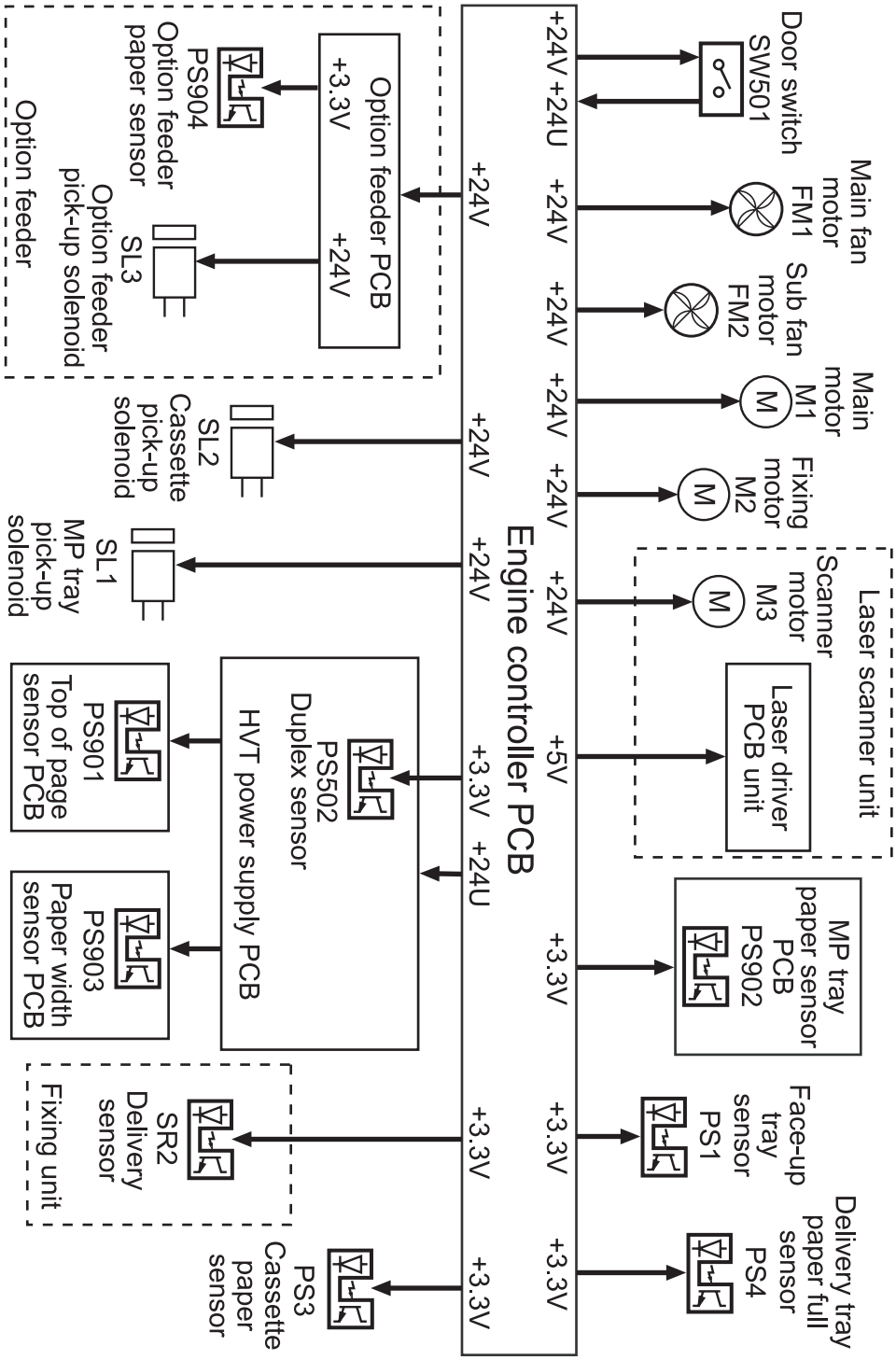



**Figure 4-33** Electrical structure (2 of 2)


Engine controller PCB
+24V
+24U
+5V
+3.3V
Door switch
SW501
Main fan motor
FM1
Sub fan motor
FM2
Main motor
M1
Fixing motor
M2
Laser scanner unit
Scanner motor
M3
Laser driver PCB unit
MP tray paper sensor PCB
PS902
Face-up tray sensor
PS1
Delivery tray paper full sensor
PS4
PS3
Cassette paper sensor
SR2
Delivery sensor
Fixing unit
Option feeder PCB
+3.3V
Option feeder paper sensor
PS904
Option feeder pick-up solenoid
SL3
Option feeder
SL2
Cassette pick-up solenoid
SL1
MP tray pick-up solenoid
PS502
Duplex sensor
HVT power supply PCB
PS901
Top of page sensor PCB
PS903
Paper width sensor PCB

# 5 Removal and replacement

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- High-voltage power supply (HVPS)
- Feed-guide assembly
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- Gear assembly
- Reinstallation notes for the gear assembly
- Tray 1 solenoid
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- Pickup assembly
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# Introduction

This chapter documents removal and replacement of field replaceable units (FRUs) only.

## Removal and replacement strategy

Replace parts in the reverse order of their removal. Directions for difficult or critical replacement procedures are included.

**WARNING!** The sheet-metal edges of the device can be sharp. Use caution when working on the device.

**NOTE:** Note the length, diameter, color, type, and location of each screw. Be sure to return each screw to its original location during reassembly.

Incorrectly routed or loose cables can interfere with other internal components and can become damaged or broken. Frayed or pinched cables can be difficult to locate. When reconnecting the cables, always use the provided wire loops, lance points, or cable guides.

## Electrostatic discharge

**CAUTION:** The device contains parts that are sensitive to electrostatic discharge (ESD). Always service the device at an ESD-protected workstation, or use an ESD mat.

Watch for the ESD symbol (shown at left) to identify the parts that are sensitive to ESD. Protect these parts by using an ESD wrist strap and by placing ESD-sensitive parts into protective ESD pouches.

## User-replaceable parts

To remove and replace the pickup roller or separation pad, see Separation pad on page 206.

## Required tools

The following tools are needed to service this device:

- #2 Phillips screwdriver with magnetic tip
- Short Phillips screwdriver with magnetic tip (also known as a “stubby” screwdriver)
- Small flat-blade screwdriver
- Small needle-nose pliers
- ESD mat
- Small flashlight

△ **CAUTION:** A pozidriv screwdriver will damage screw heads on the device. Use a #2 Phillips screwdriver.

If you use a multispeed screwdriver, use a torque limiter.

## Before performing service

Follow the pre-service procedures before you perform service.

### Pre-service procedures

1. Remove all media from the device.
2. Place the device on an ESD mat. If an ESD mat or an ESD-protected workstation is not available, discharge body static and ground the device chassis before servicing the device.
3. Unplug the power cord and the interface cable.
4. Lift the device off of any installed optional trays.
5. Remove the print cartridge.

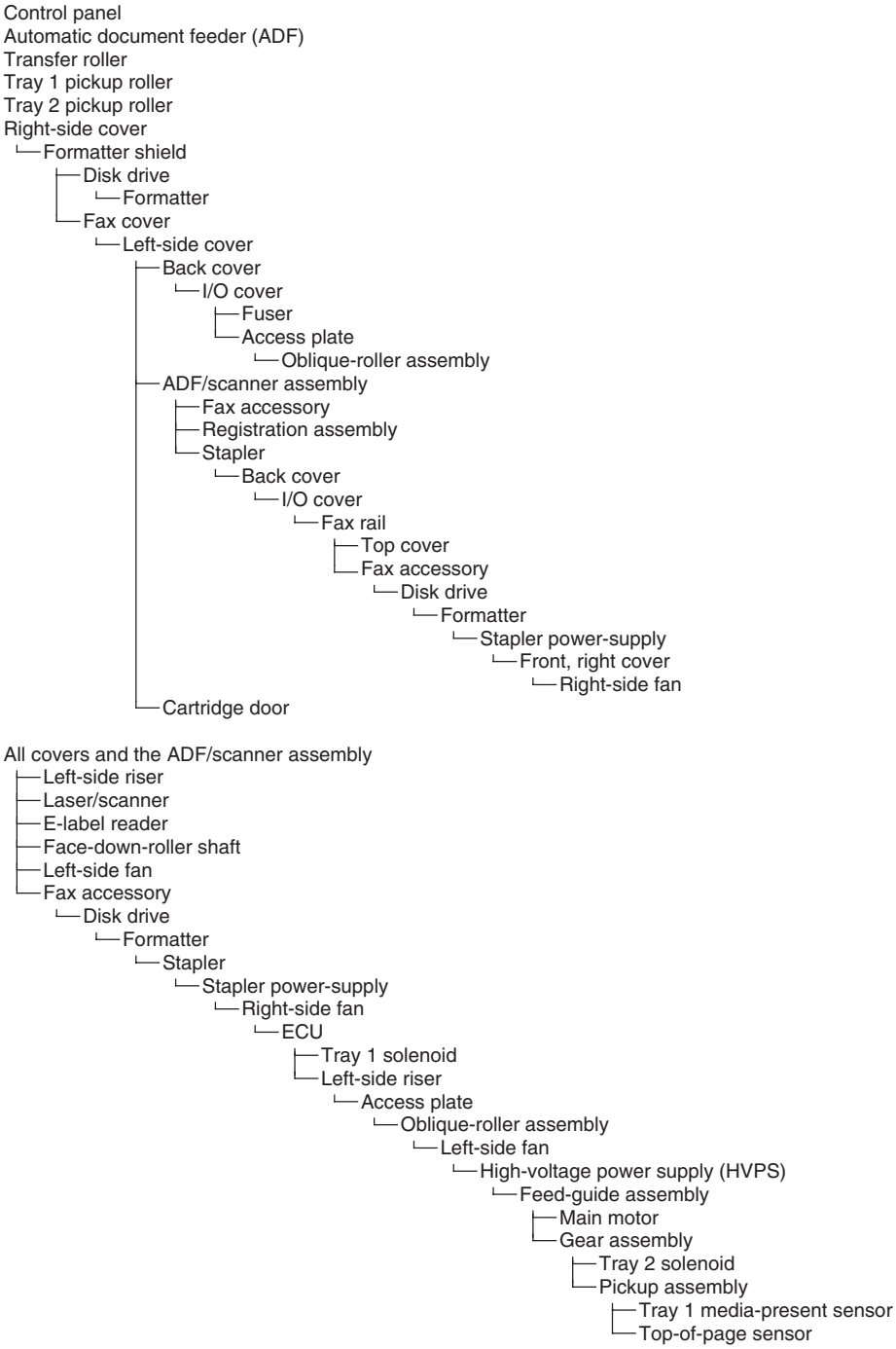
   △ **CAUTION:** To prevent light from degrading the surface of the photosensitive drum, cover the print cartridge after removing it from the device.

6. Remove tray 2.

## Parts removal order

Each section contains a list of covers and assemblies that have to be removed before working on the major assembly that is the subject of the section.

**Figure 5-1** Parts removal diagram



# Automatic document feeder (ADF) and scanner assemblies

Automatic document feeder (ADF) and scanner assemblies

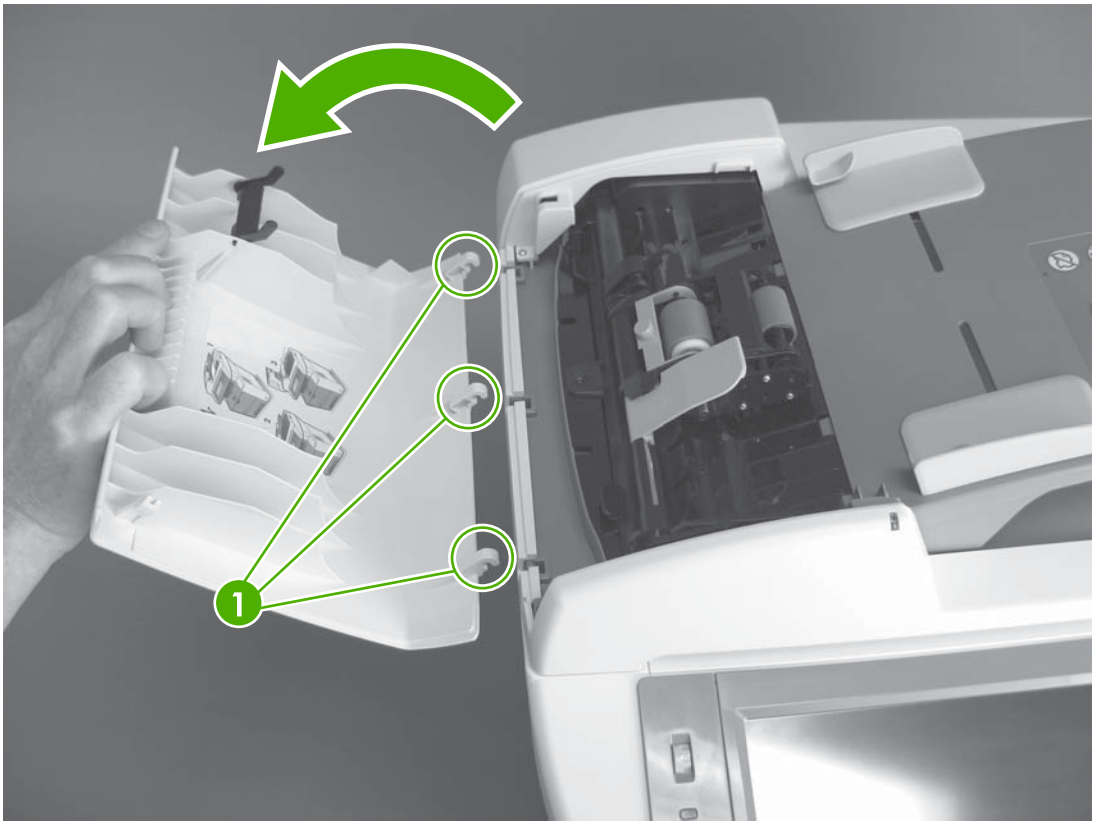
## ADF assembly

The ADF cover and the ADF input tray need not be removed unless they require service.

### ADF cover

1. Open the ADF cover.
2. Rotate the ADF cover firmly toward the left side of the device and down to release three tabs (callout 1).

**Figure 5-2** Removing the ADF cover



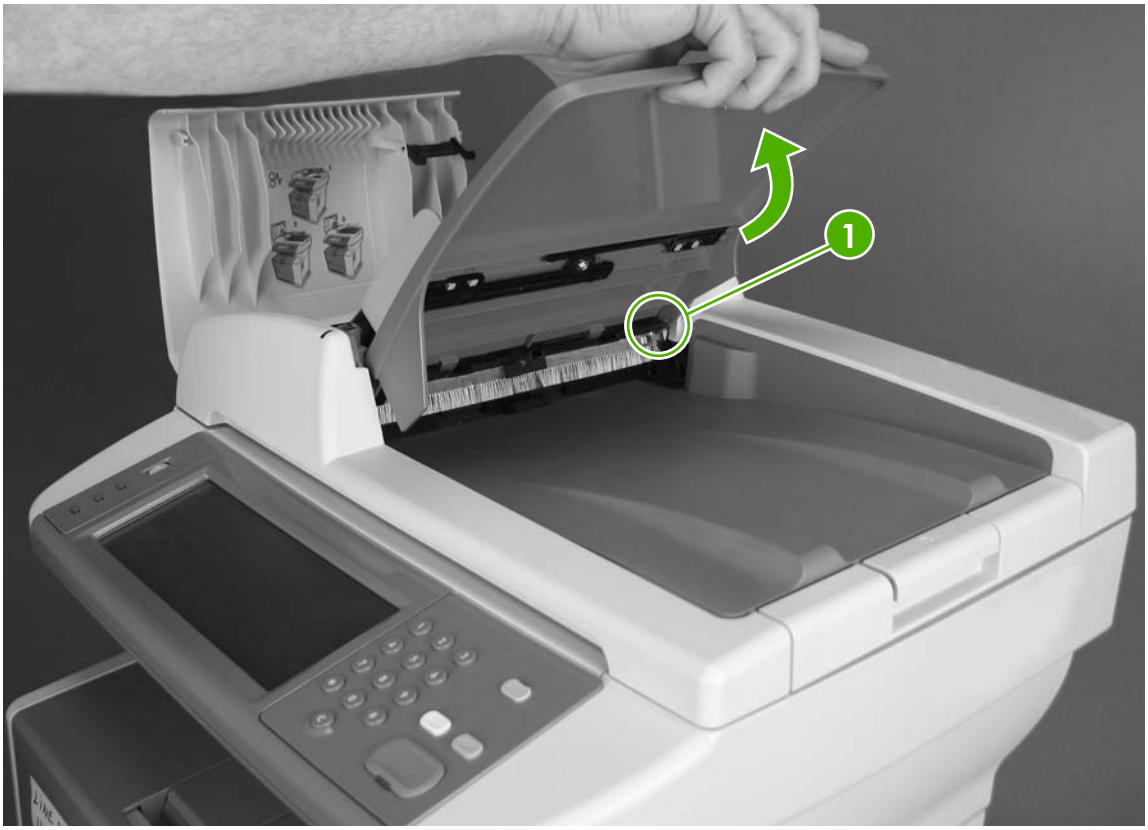

**Reinstallation tip** When reinstalling the ADF cover, firmly press the three tabs until they click into place. When the three tabs are installed correctly, the cover should close easily. If it does not, open the ADF cover and check the tabs. Do not force the ADF cover closed. Forcing the ADF cover closed can damage the cover.

**Figure 5-3** Reinstalling the ADF cover

## ADF input tray

1. Open the ADF cover.
2. Pull the ADF input tray up firmly to release one tab (callout 1).

**Figure 5-4** Removing the ADF input tray




**Reinstallation tip** When reinstalling the ADF input tray, slide the tray straight into place. ADF jams and skew can result from incorrect reinstallation.

**Figure 5-5** Reinstalling the ADF input tray

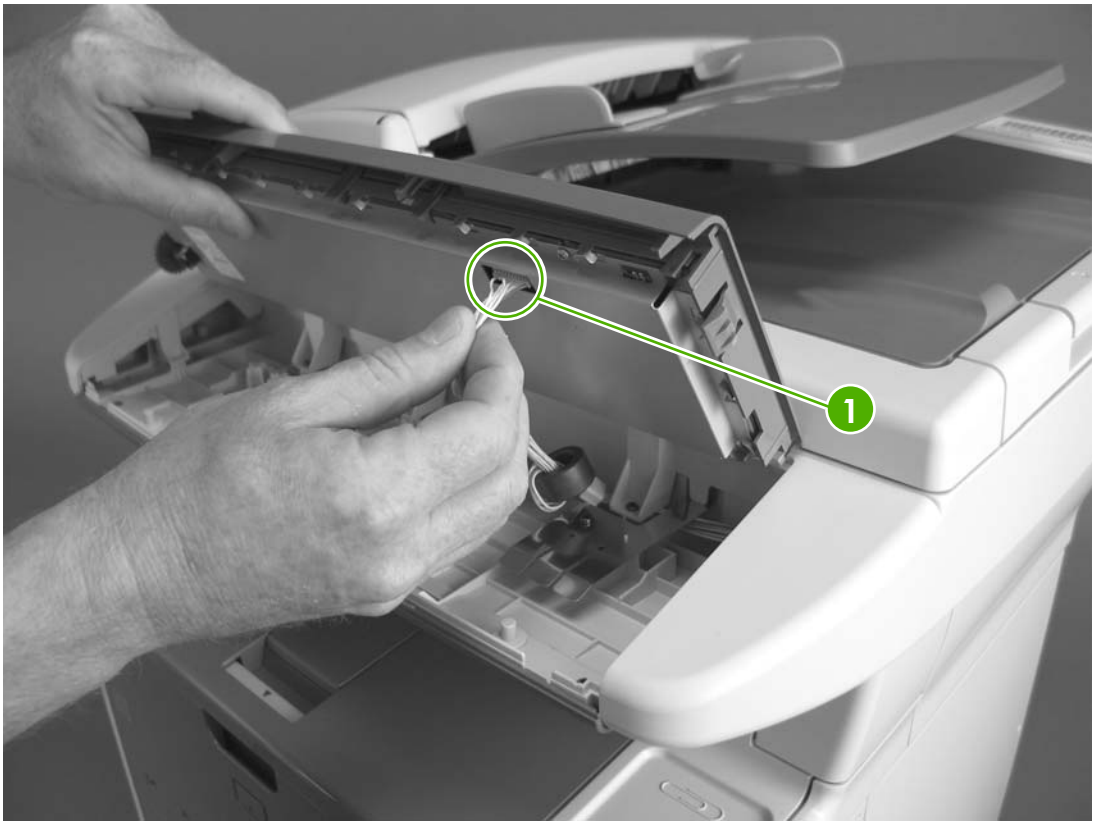
## Control panel

1. Insert a flat-blade screwdriver into the gap at the left side of the control panel to disengage the control panel and then lift up the front of the control panel.

**Figure 5-6** Removing the control panel (1 of 2)

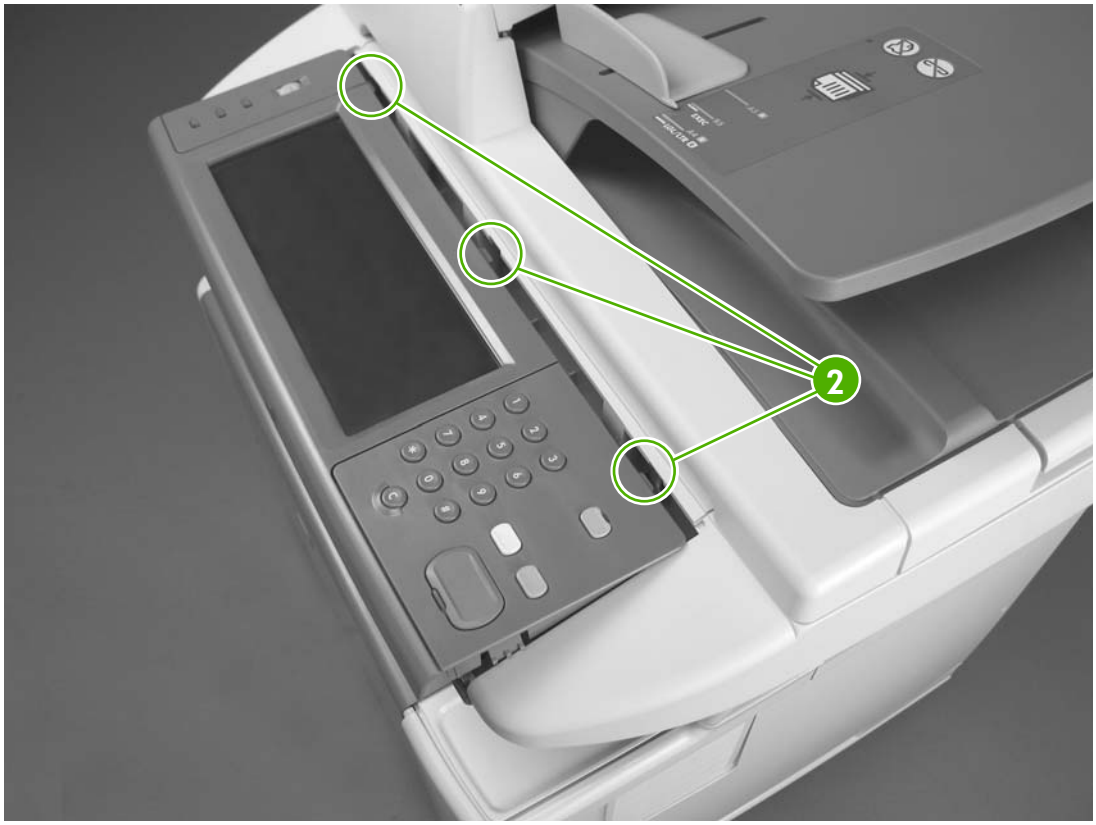
2. Disconnect one cable (callout 1).

**Figure 5-7** Removing the control panel (2 of 2)




3. Lift the control panel off of the device.

**Figure 5-8** Reinstalling the control panel




**Reinstallation tip** Make sure that you insert the tabs at the back of the control panel (callout 2) into the slots.

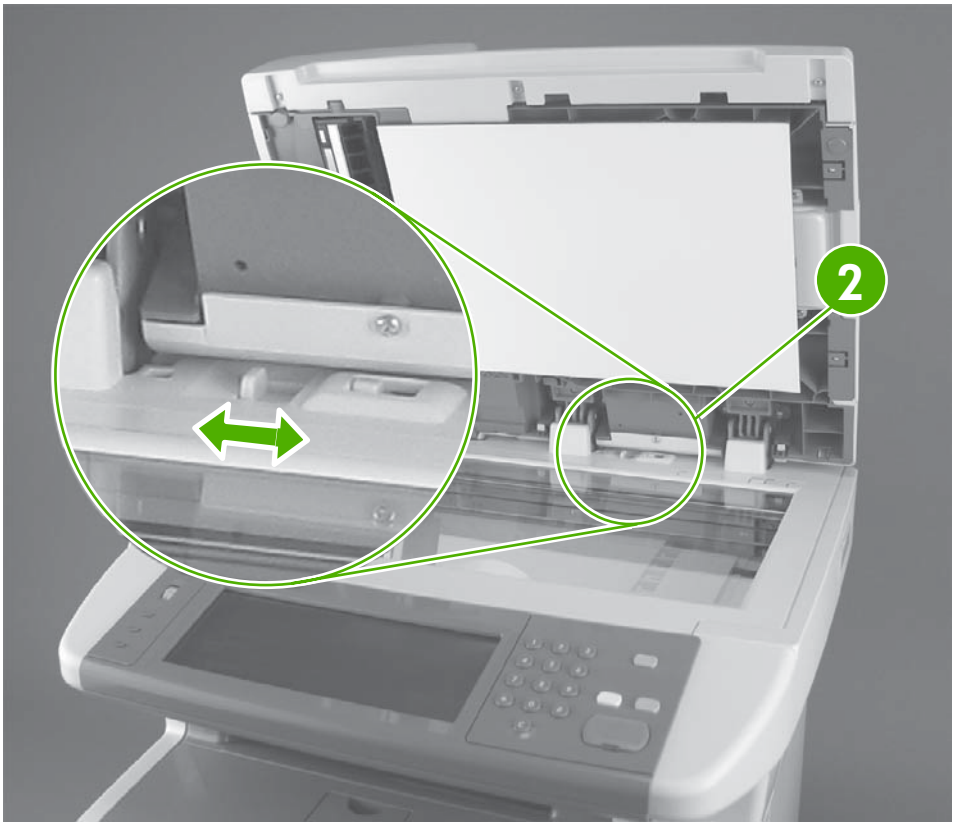
## ADF

1. Unscrew the thumb screws (callout 1) on the ADF cable at the back of the device and then unplug the cable.

**Figure 5-9** Removing the ADF (1 of 3)

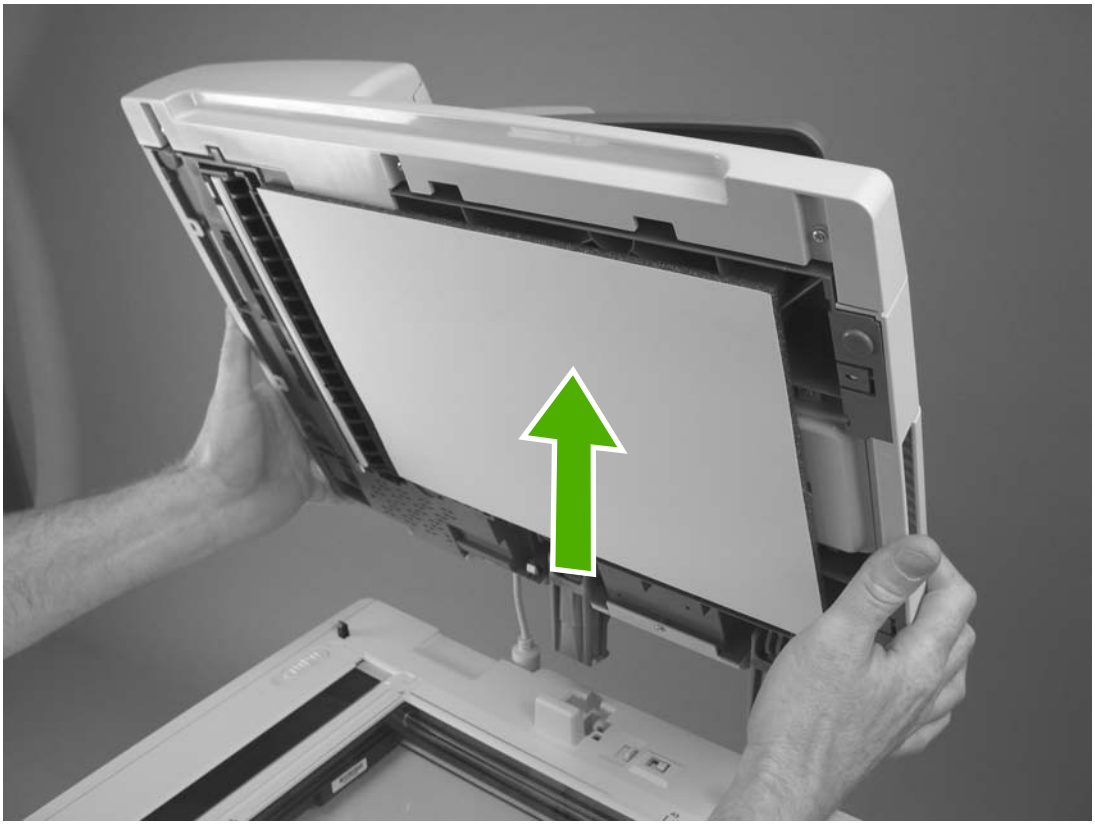
2. Lift the ADF lid and then press the hinge-release tab (callout 2) toward the right side of the device.

**Figure 5-10** Removing the ADF (2 of 3)



3. Lift the ADF off of the device.

**Figure 5-11** Removing the ADF (3 of 3)



## Scanner assembly

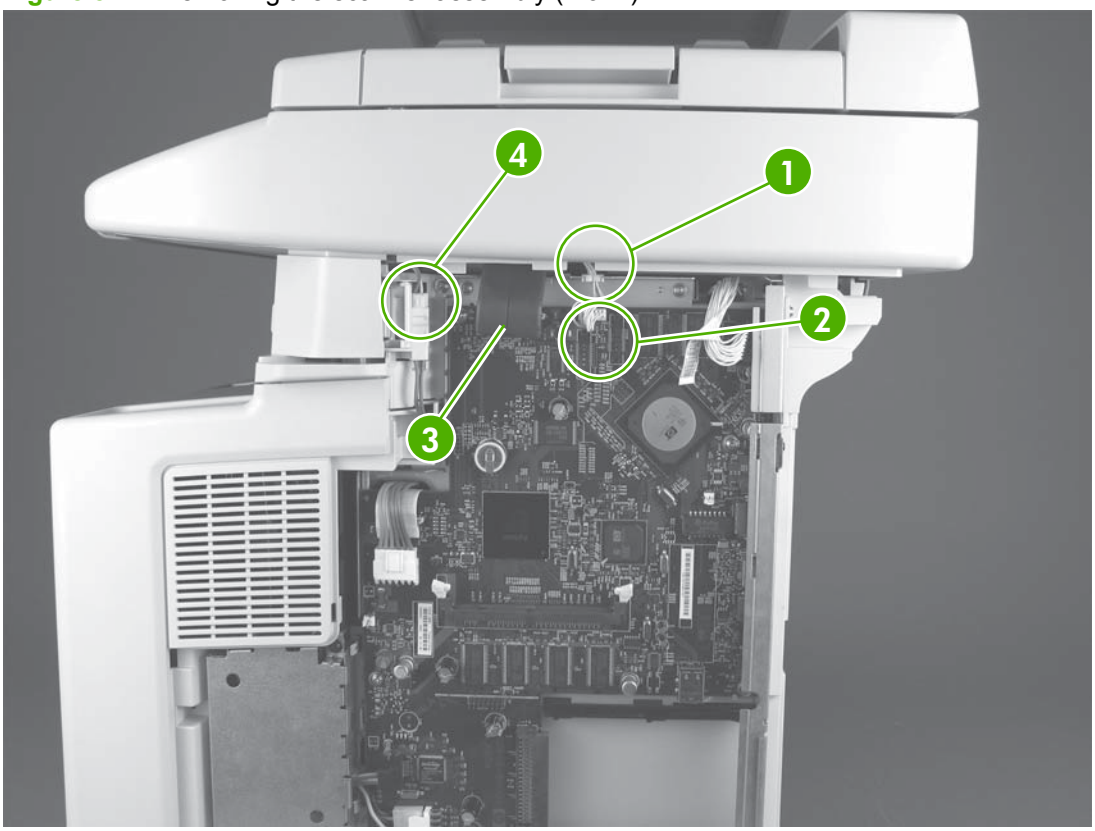
**NOTE:** If you are not replacing the scanner assembly, but need to remove it in order to gain access to assemblies inside the printer portion of the device, you can remove the scanner assembly and ADF together. To remove the scanner assembly and ADF together, begin this procedure with step 2.

1. Remove the ADF (see ADF assembly on page 100).
2. Remove the right-side cover (see Right-side cover on page 114), the formatter shield (see Formatter shield on page 115), the fax cover (see Fax cover on page 116), and the left-side cover (see Left-side cover on page 117).
3. Remove one cable from the cable guide (callout 1) and then disconnect the cable (callout 2) from the formatter.

**CAUTION:** Failure to remove the cable from the cable guide can cause damage to the cable.

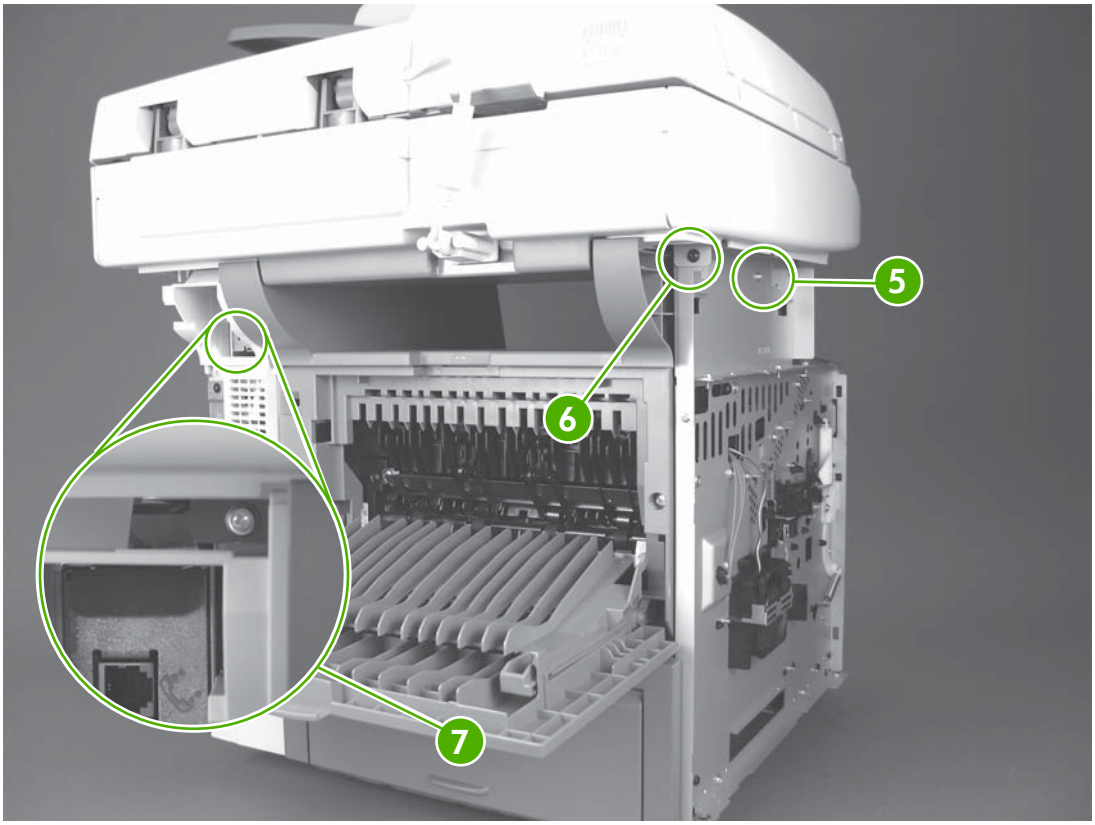
4. Disconnect the ribbon cable (callout 3) and then separate the power-cable connector (callout 4).

**Figure 5-12** Removing the scanner assembly (1 of 4)



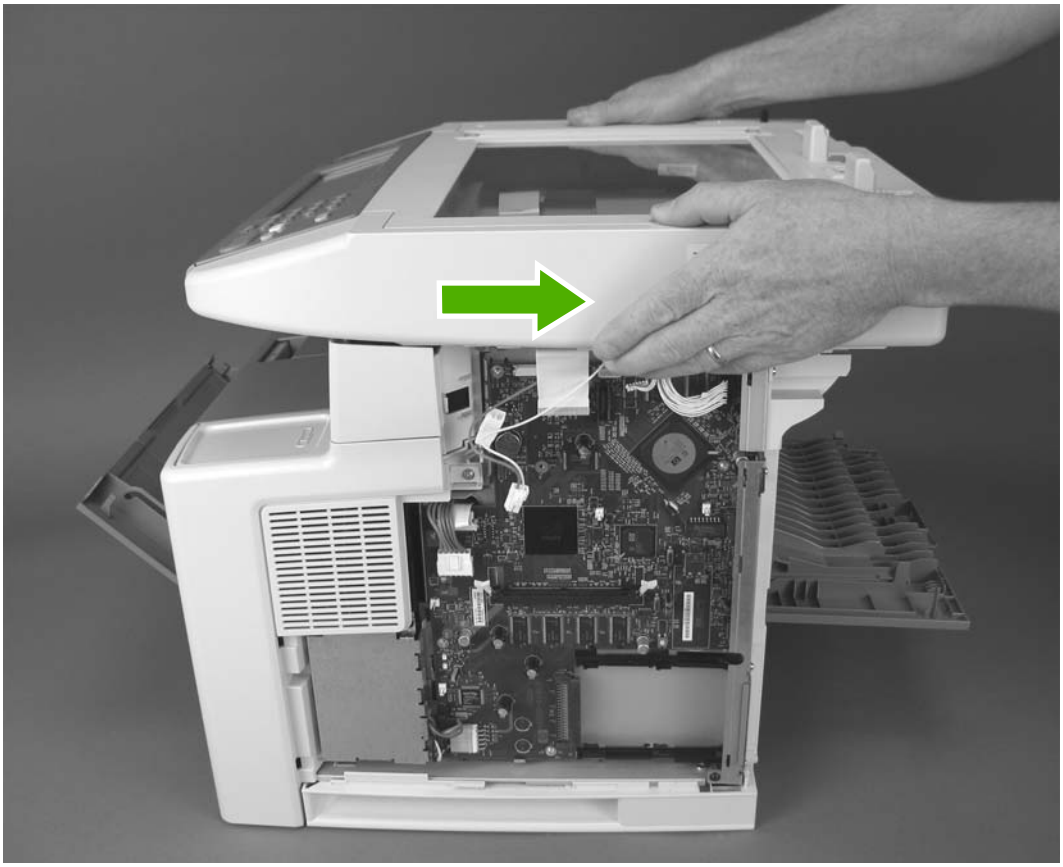
5. Remove one screw (callout 5) at the left side and two screws (callouts 6 and 7) at the back of the device.

**Figure 5-13** Removing the scanner assembly (2 of 4)



6. Slide the scanner assembly toward the back of the device until it stops.

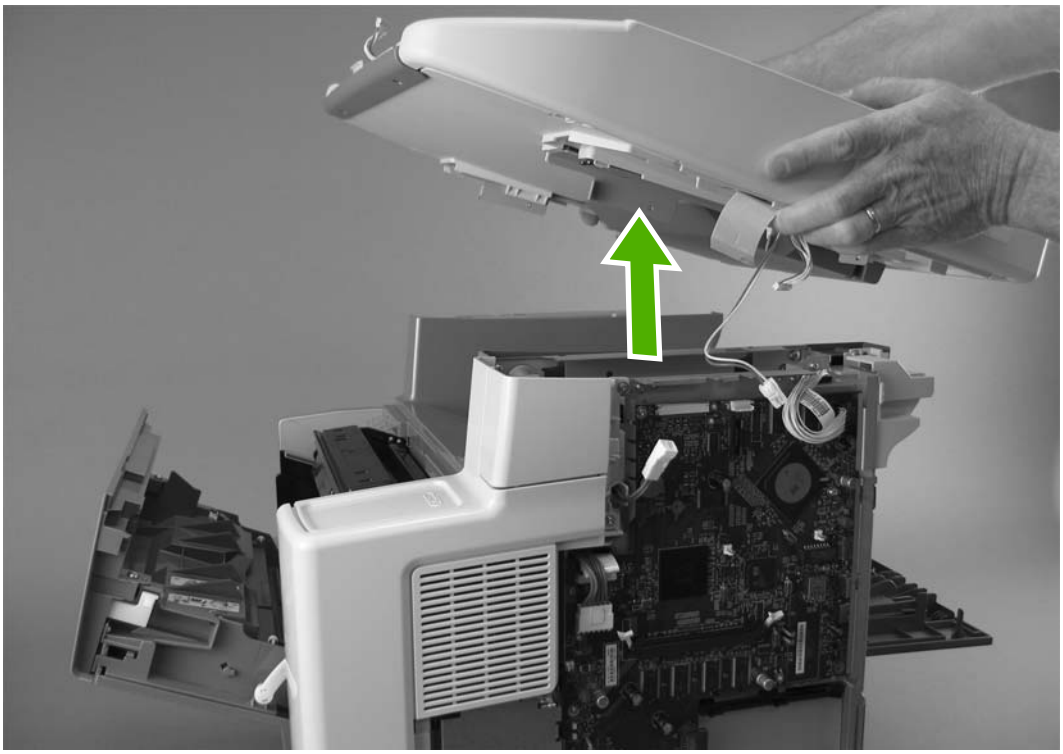
**Figure 5-14** Removing the scanner assembly (3 of 4)



**Reinstallation tip** Upon reinstallation, the stapler can block the scanner assembly from moving into the correct position. If the assembly is blocked, open the stapler door and then press down on the stapler as you try to slide the scanner assembly toward the front of the device.

7. Lift the assembly straight up and off of the device.

**Figure 5-15** Removing the scanner assembly (4 of 4)



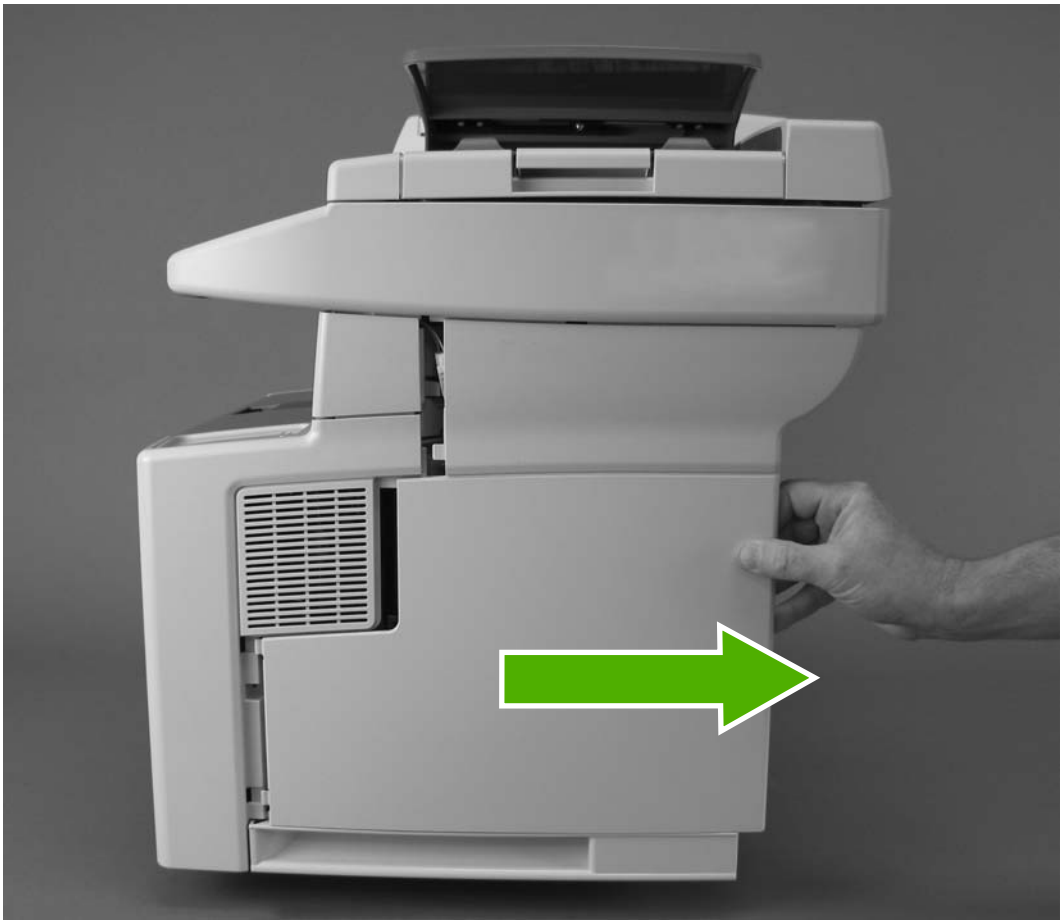
# Covers

Not all covers have to be removed to get to various FRUs. Use the list provided in each section to determine which covers and other components must be removed.

## Right-side cover

1. Slide the right-side cover toward the back of the device.

**Figure 5-16** Removing the right-side cover

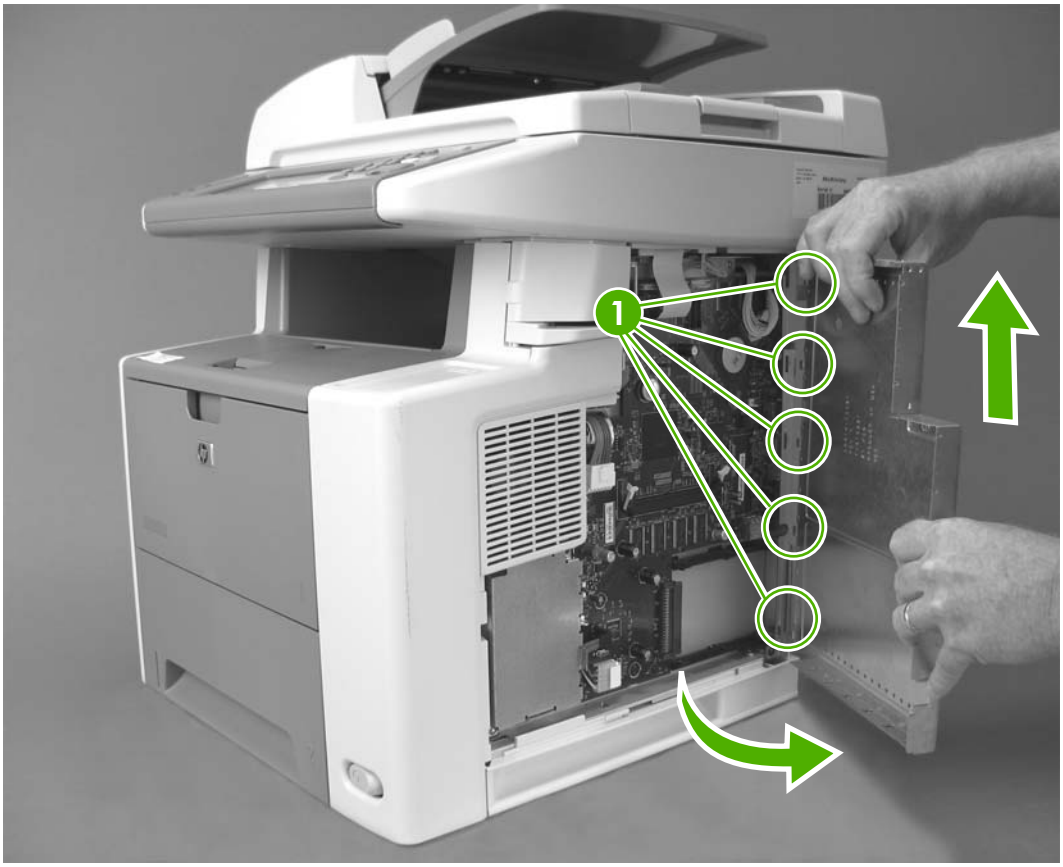


2. Lift the cover away from the device.

## Formatter shield

1. Remove the right-side cover (see Right-side cover on page 114).
2. Rotate the formatter shield away from the front of the device, and then lift it off of its hinges (callout 1) at the back of the device.

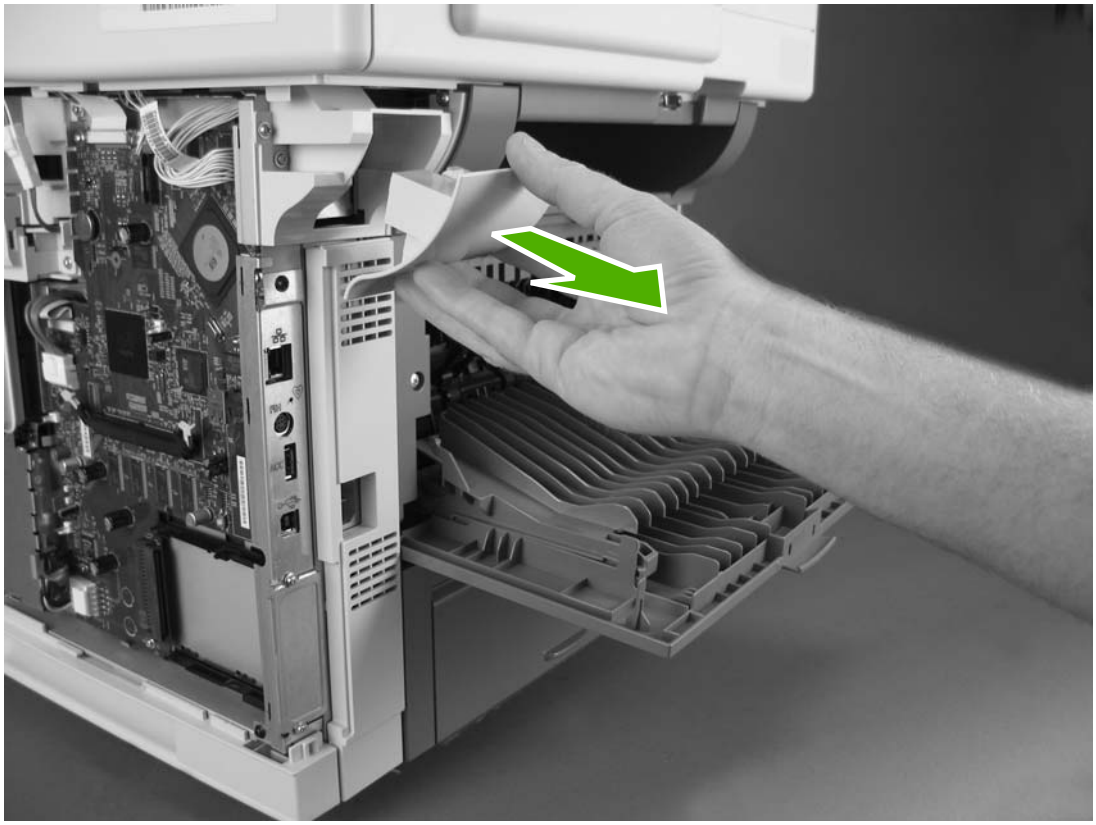
**Figure 5-17** Removing the formatter shield



## Fax cover

Pull the fax cover away from the back of the device.

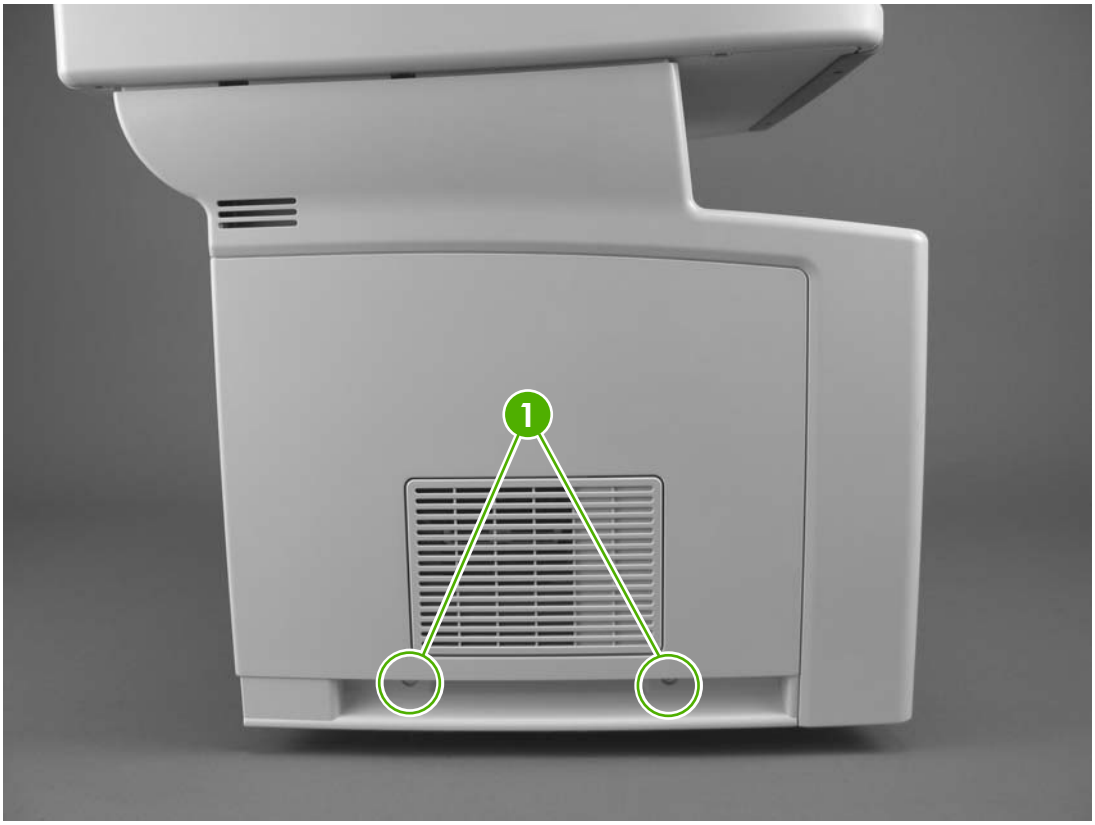
**Figure 5-18** Removing the fax cover



## Left-side cover

1. Remove two screws (callout 1).

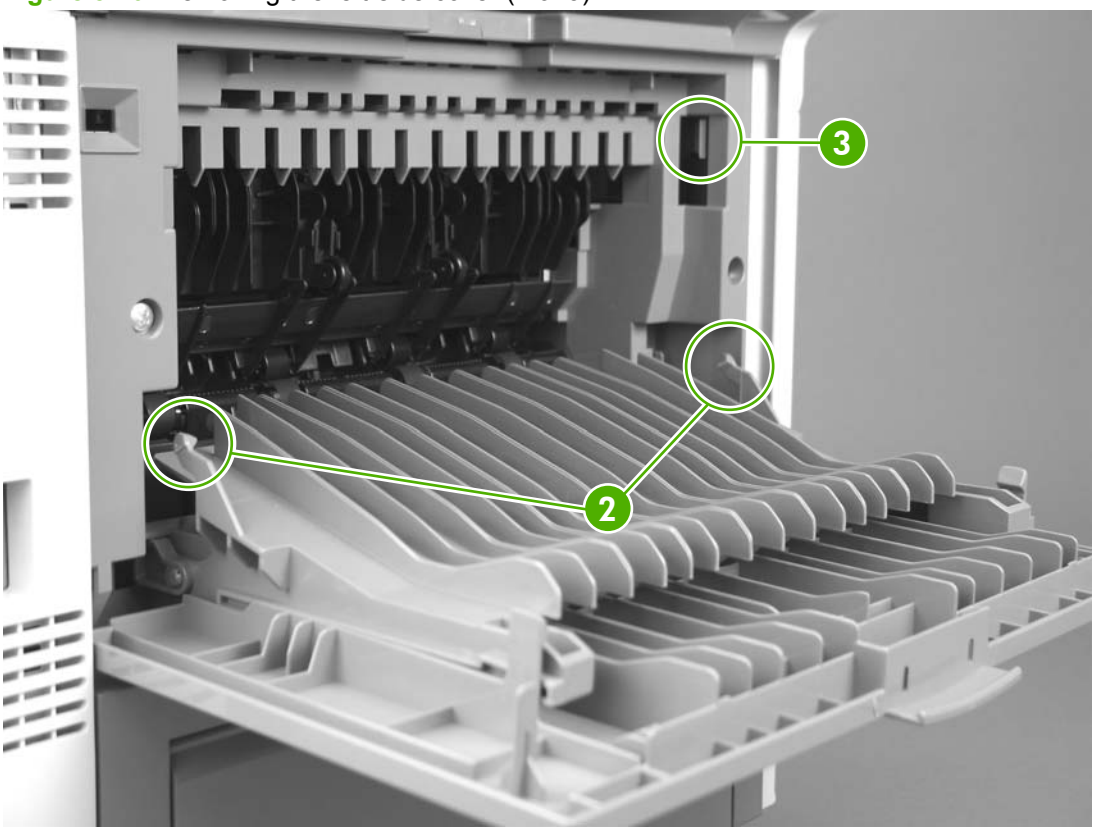
**Figure 5-19** Removing the left-side cover (1 of 3)




2. Open the cartridge door.
3. Open the rear output bin all the way, and then press the output bin down firmly to disengage two door-stops (callout 2 in Figure 5-20 Removing the left-side cover (2 of 3) on page 118).

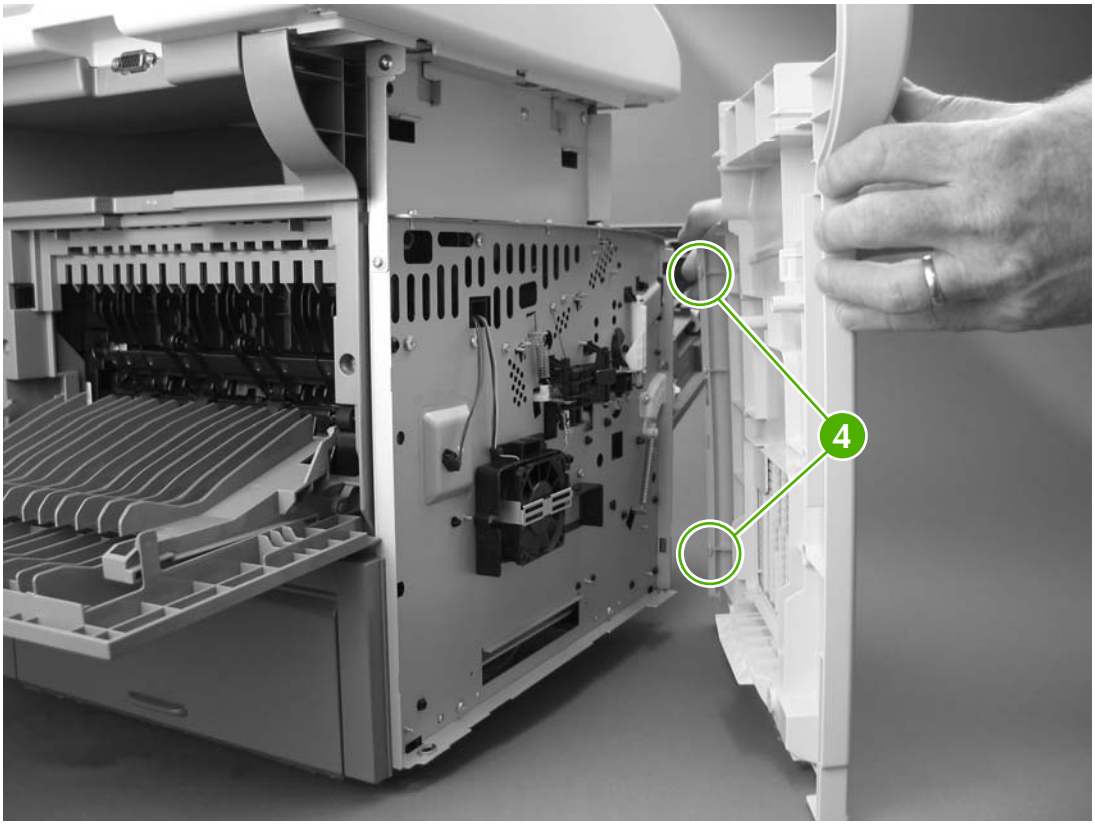
4. Use a flat-blade screwdriver to press one tab (callout 3) toward the back of the device, and then rotate the cover away from the back of the device.

**Figure 5-20** Removing the left-side cover (2 of 3)



5. Slide the cover toward the front of the device to clear tabs at the front (callout 4), and then lift the cover away from the device.

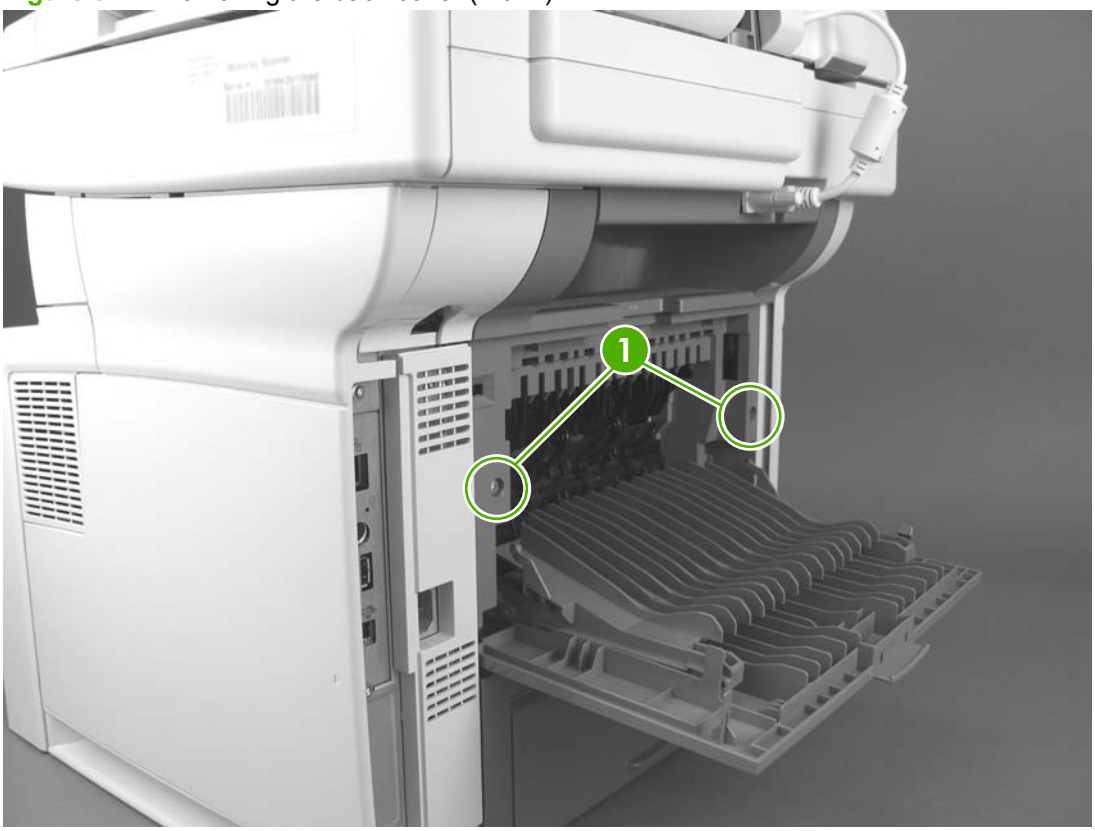
**Figure 5-21** Removing the left-side cover (3 of 3)



## Back cover

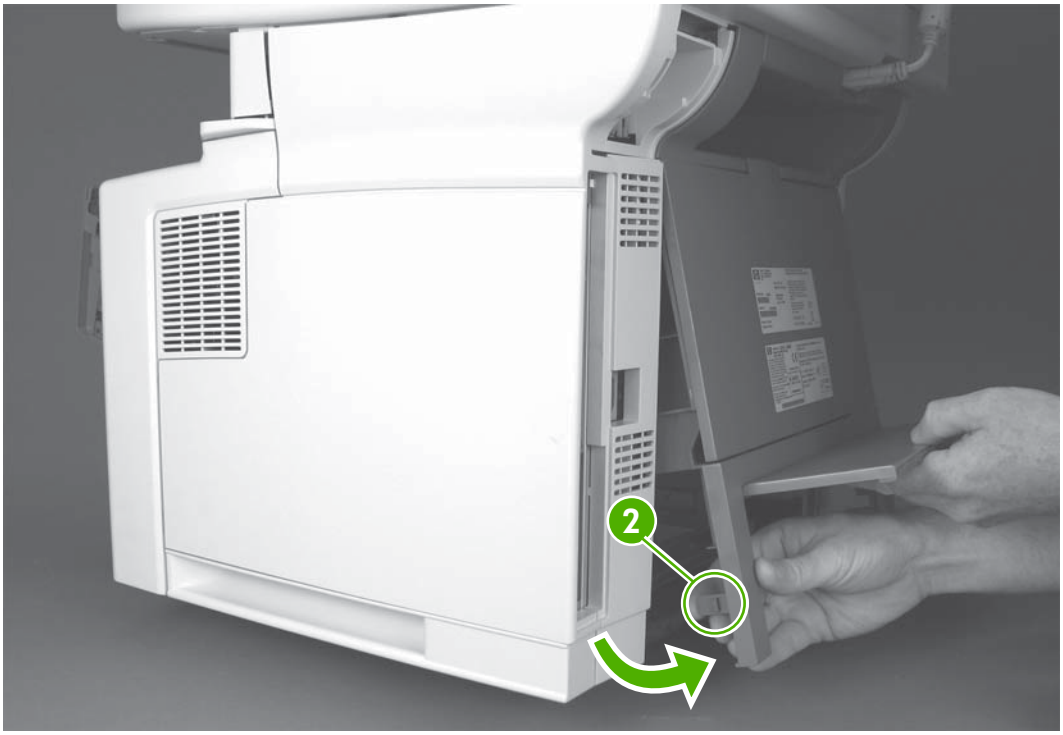
1. Remove the left-side cover (see Left-side cover on page 117) and leave the rear output bin all the way open.
2. Remove two screws (callout 1).

**Figure 5-22** Removing the back cover (1 of 2)



3. Release one tab (callout 2) inside the device and then rotate the bottom of the cover away from the device.

**Figure 5-23** Removing the back cover (2 of 2)

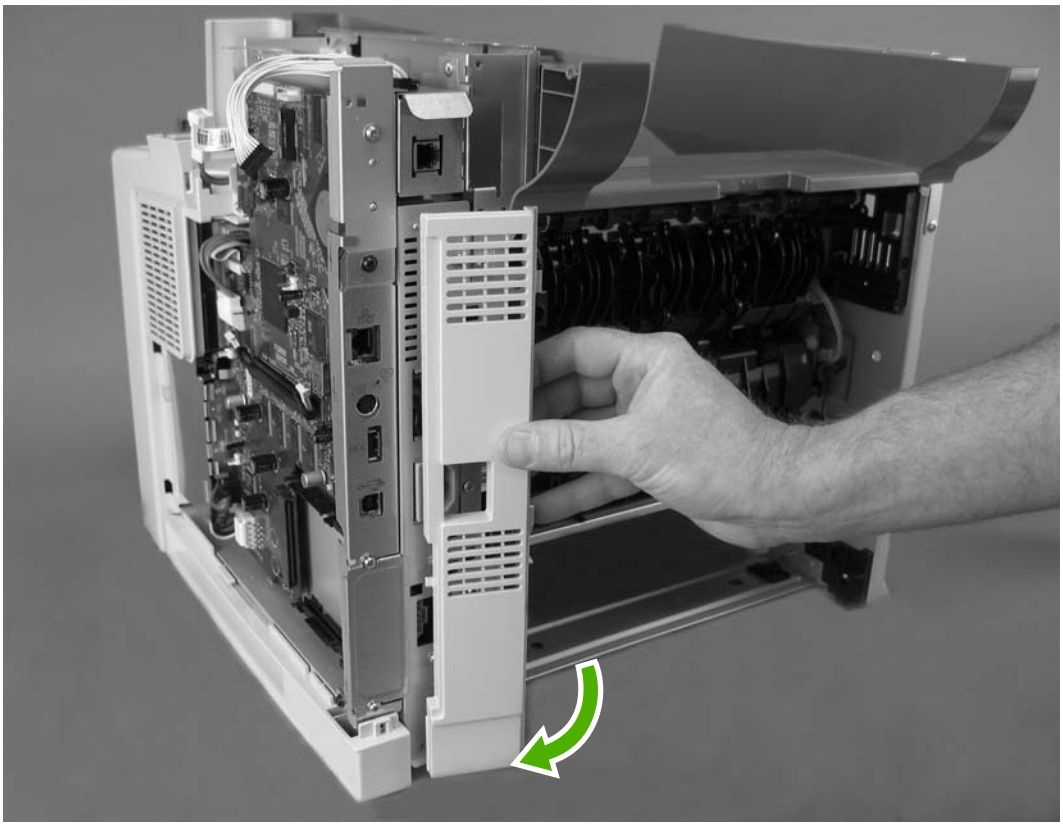



4. Lift the cover away from the device.

## I/O cover

1. Remove the back cover (see Back cover on page 120).
2. Rotate the I/O cover to clear tabs at the right side of the cover.

**Figure 5-24** Removing the I/O cover

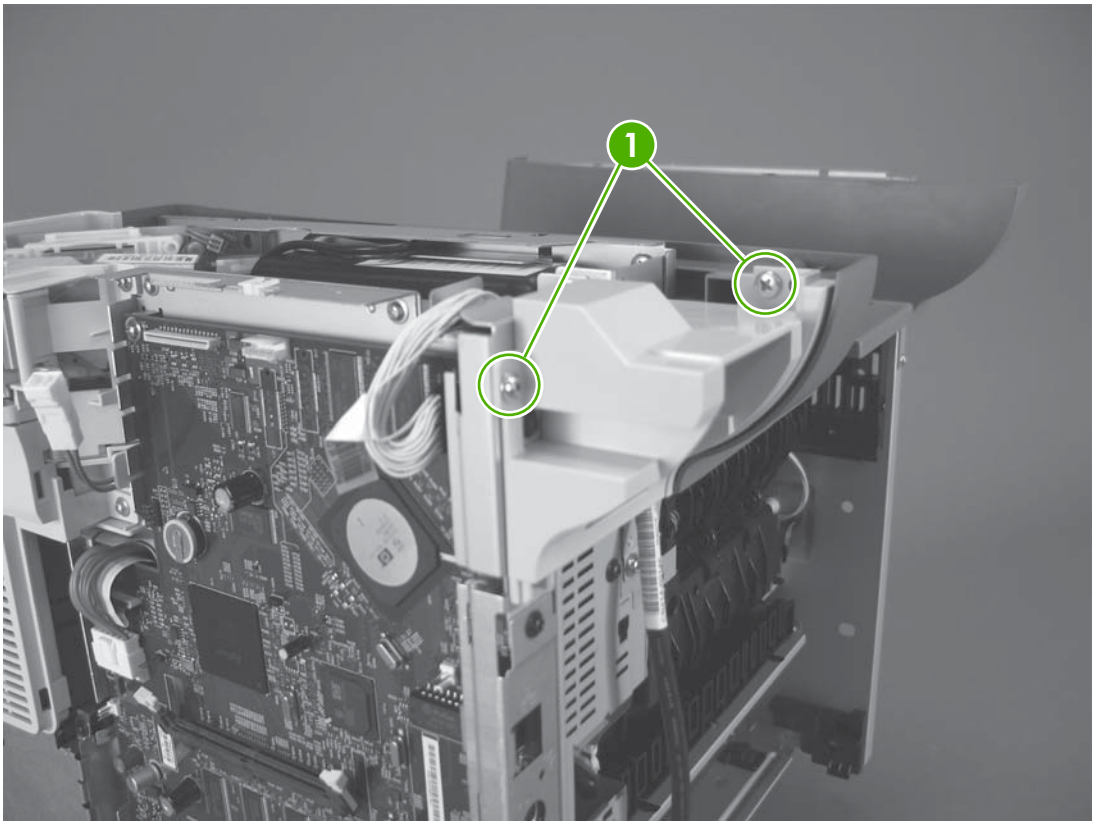


3. Lift the cover off of the device.

## Fax rail

1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Fax cover (see Fax cover on page 116)
   - Left-side cover (see Left-side cover on page 117)
   - Back cover (see Back cover on page 120)
   - I/O cover (see I/O cover on page 122)
   - ADF/scanner assembly (see Scanner assembly on page 110)
2. Remove two screws (callout 1).

**Figure 5-25** Removing the fax rail

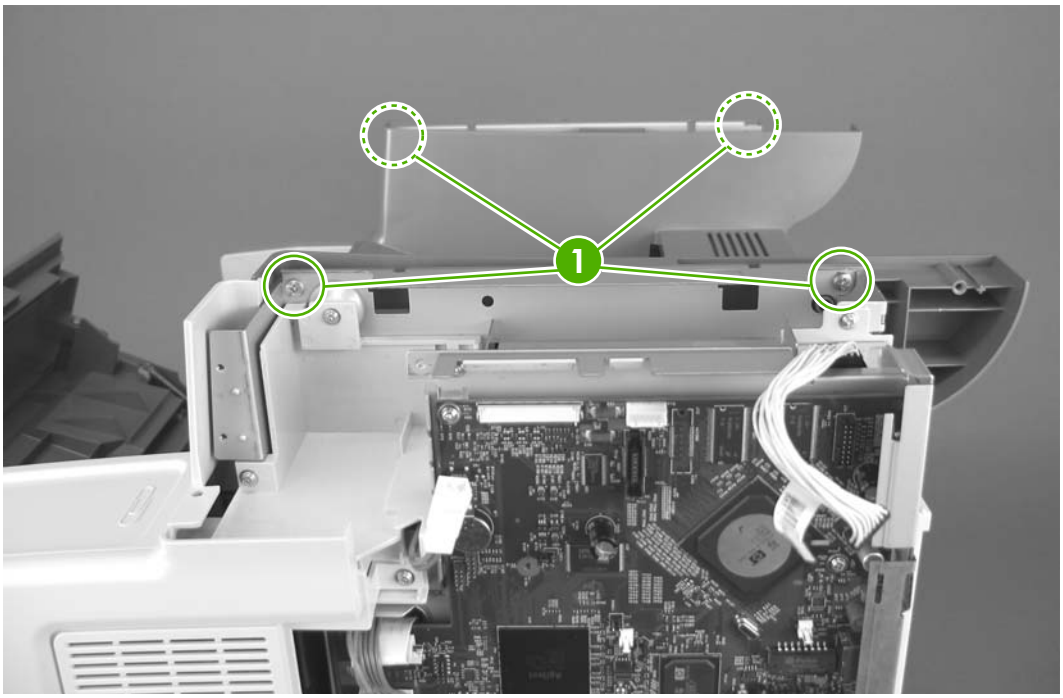



3. Lift the fax rail off of the device.

## Top cover

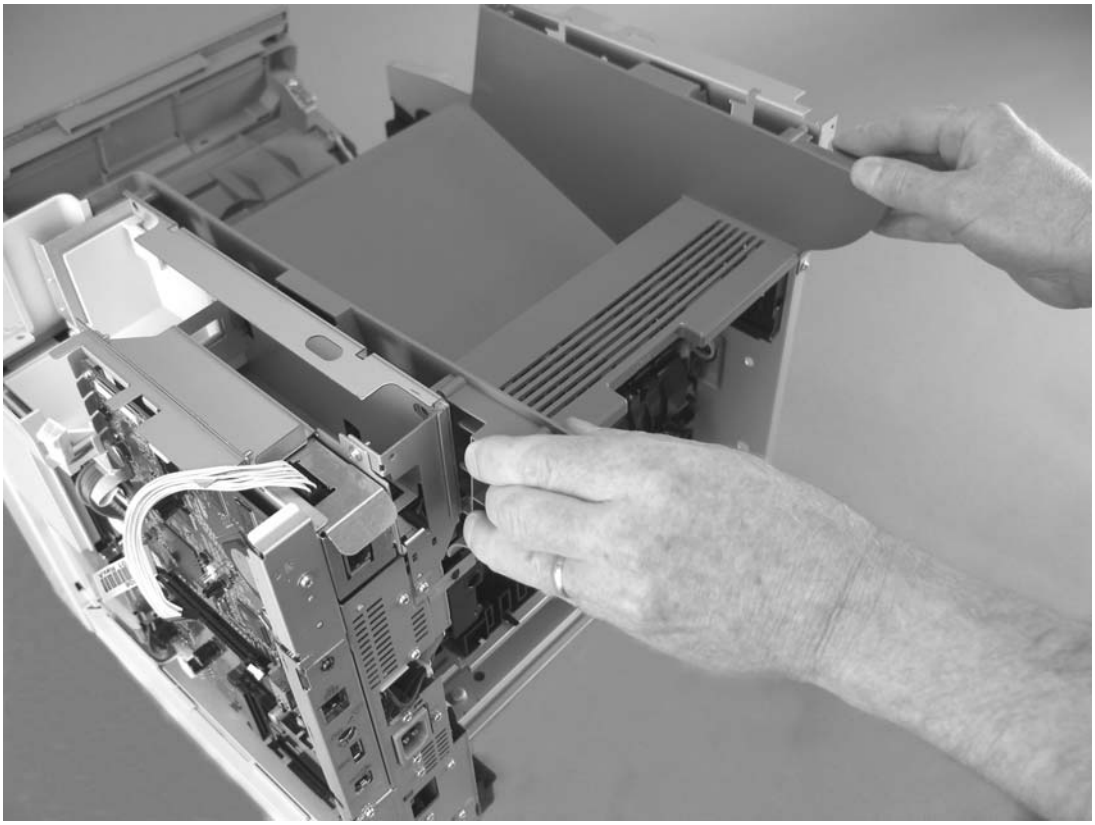
1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Fax cover (see Fax cover on page 116)
   - Left-side cover (see Left-side cover on page 117)
   - Back cover (see Back cover on page 120)
   - I/O cover (see I/O cover on page 122)
   - ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax rail (see Fax rail on page 123)
2. Remove two screws (callout 1) from each side of the device (a total of four screws).

**Figure 5-26** Removing the top cover (1 of 3)



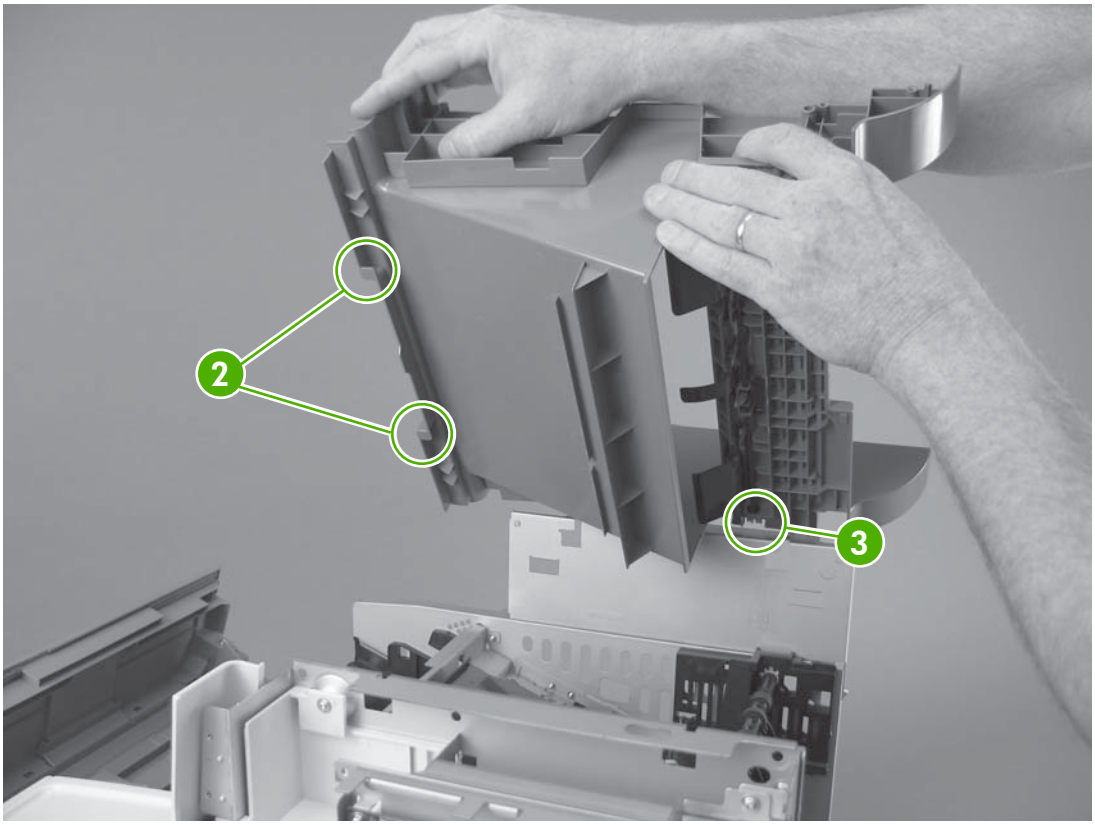
3. Squeeze the cover at the back of the device to release two tabs and lift up the cover slightly.

**Figure 5-27** Removing the top cover (2 of 3)



4. Slide the cover toward the front of the device to clear the tabs (callout 2) at the front of the device.

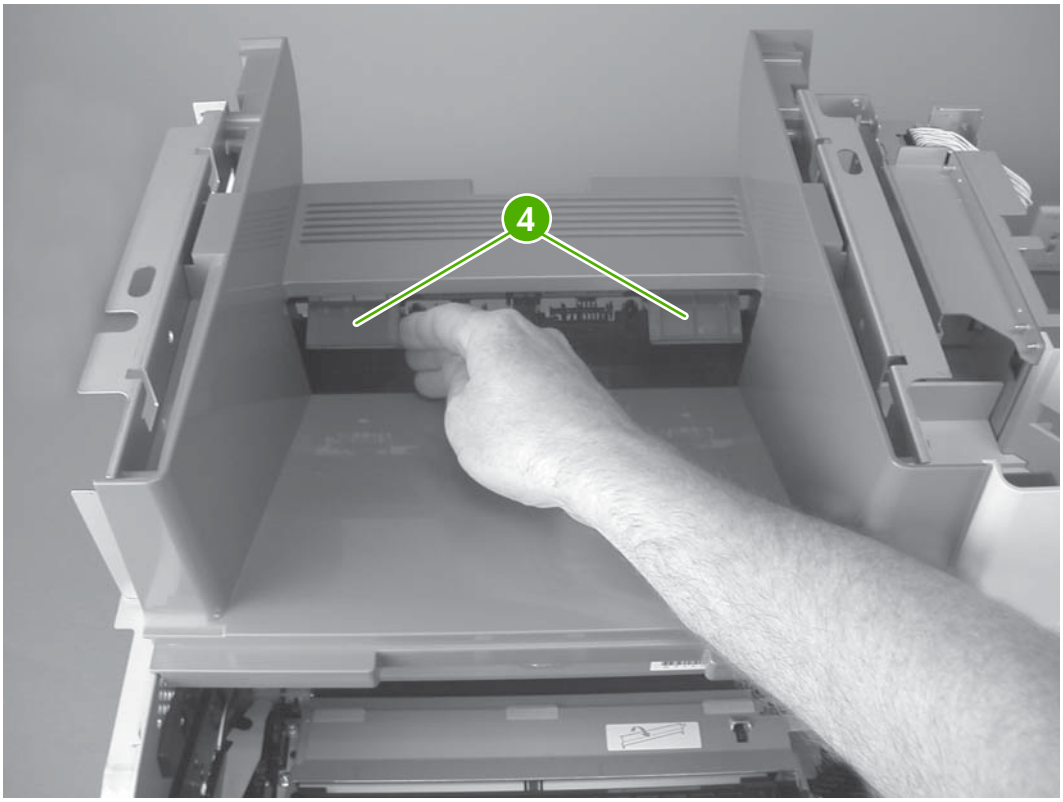
**Figure 5-28** Removing the top cover (3 of 3)




5. Lift the cover off of the device.

**Reinstallation tip** The grounding connection (callout 3) can become caught in the chassis when lifting the cover. Make sure that it is still attached to the cover before you reinstall the cover.

**Figure 5-29** Reinstalling the top cover

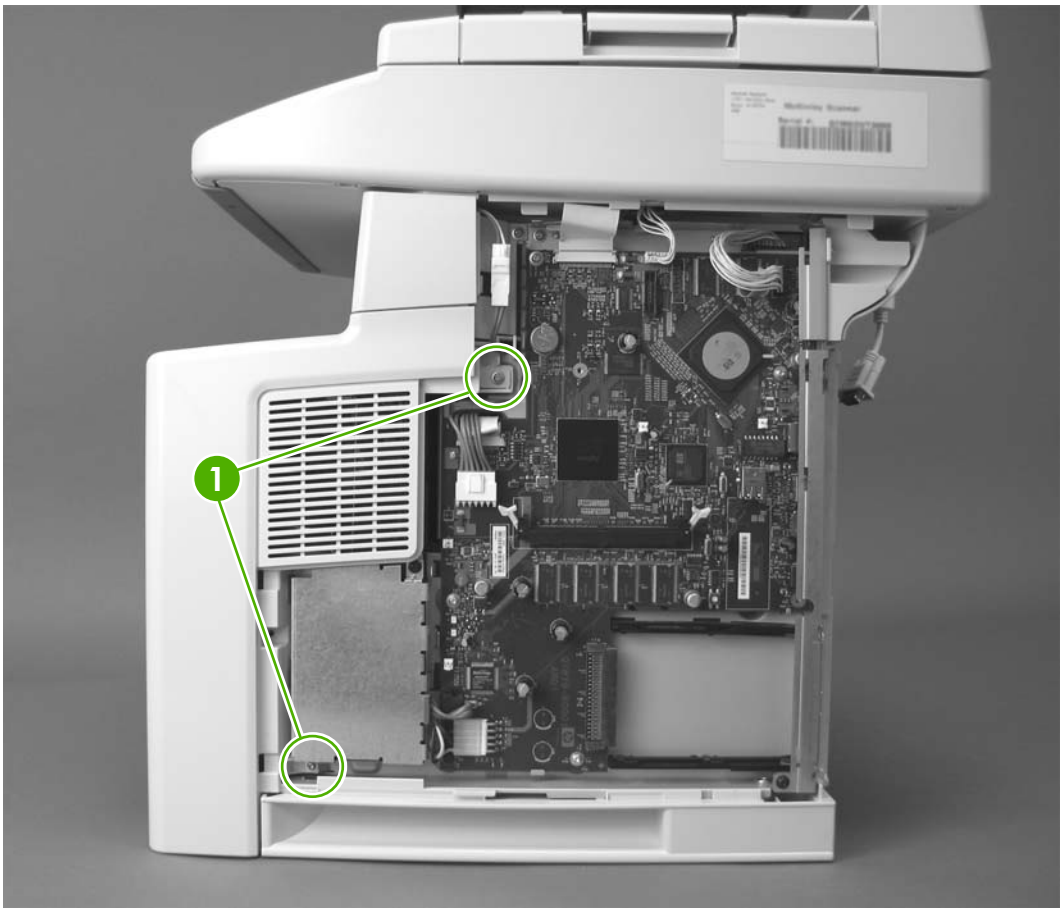



**Reinstallation tip** After reinstalling the cover, make sure that the exit-sensor flag (callout 4) moves freely.

## Front, right cover

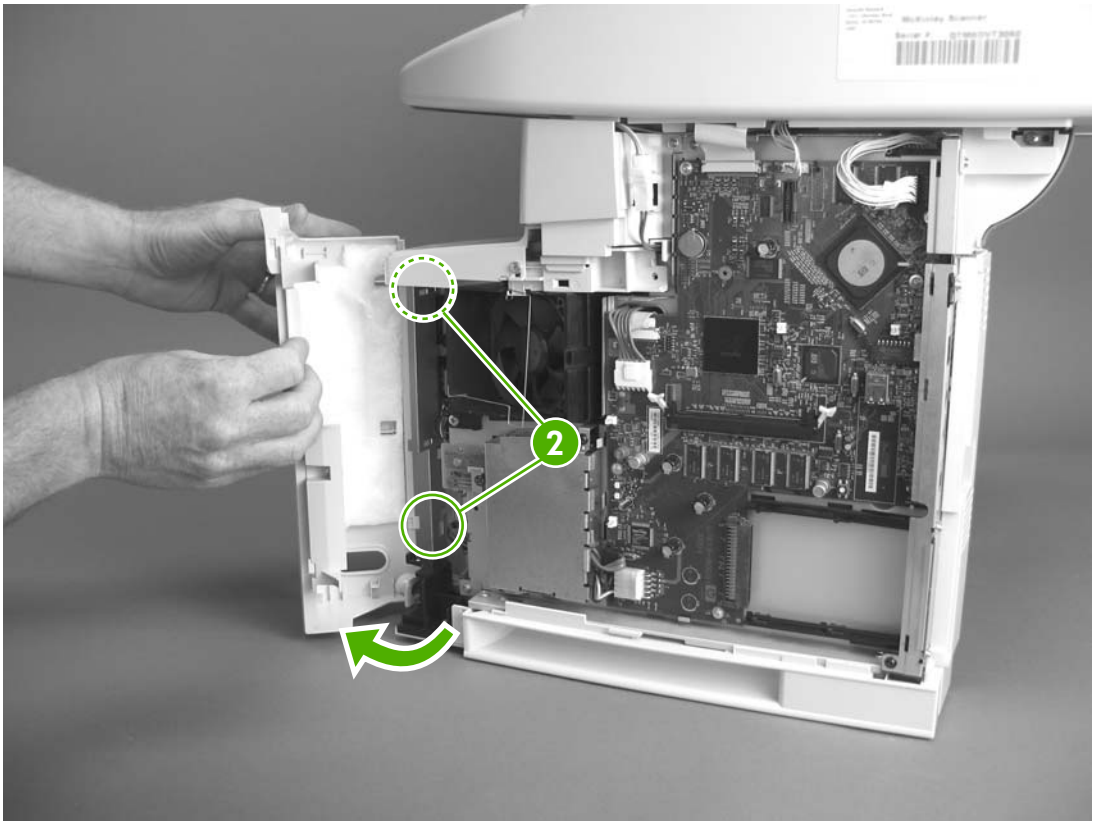
1. Remove the right-side cover (see Right-side cover on page 114).
2. Remove two screws (callout 1).

**Figure 5-30** Removing the front, right cover (1 of 2)



3. Rotate the cover away from the back of the device to clear two tabs (callout 2) at the front of the device.

**Figure 5-31** Removing the front, right cover (2 of 2)

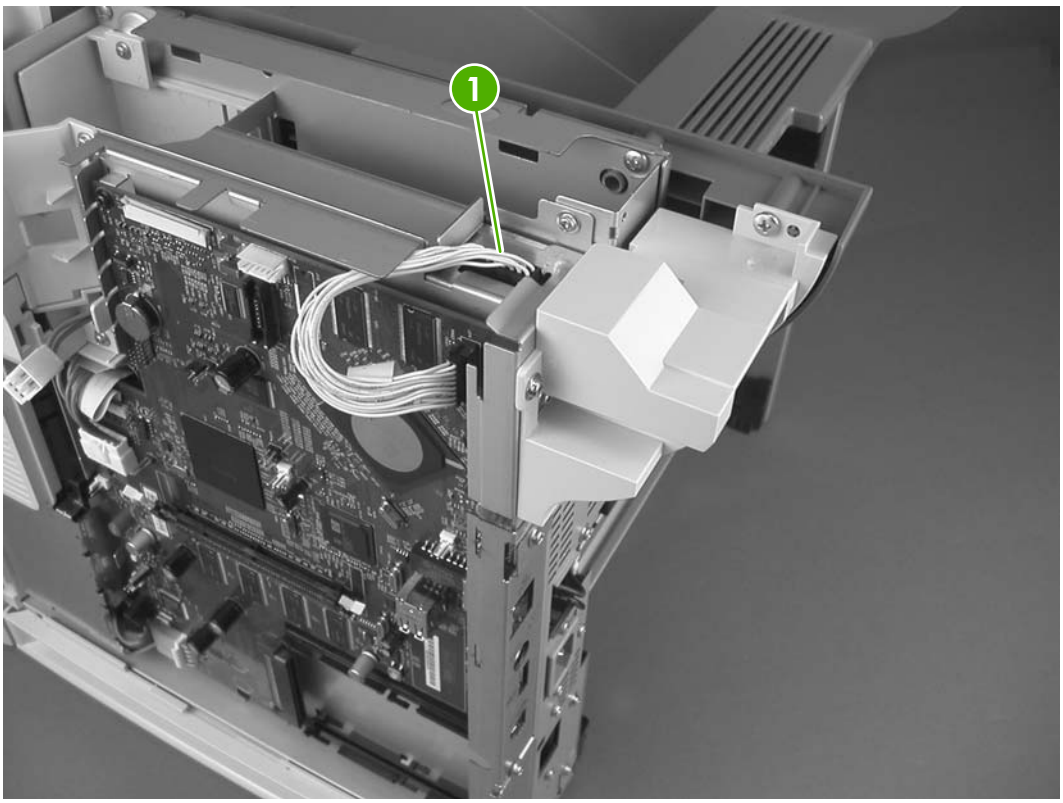



4. Lift the cover away from the device.

# Fax accessory

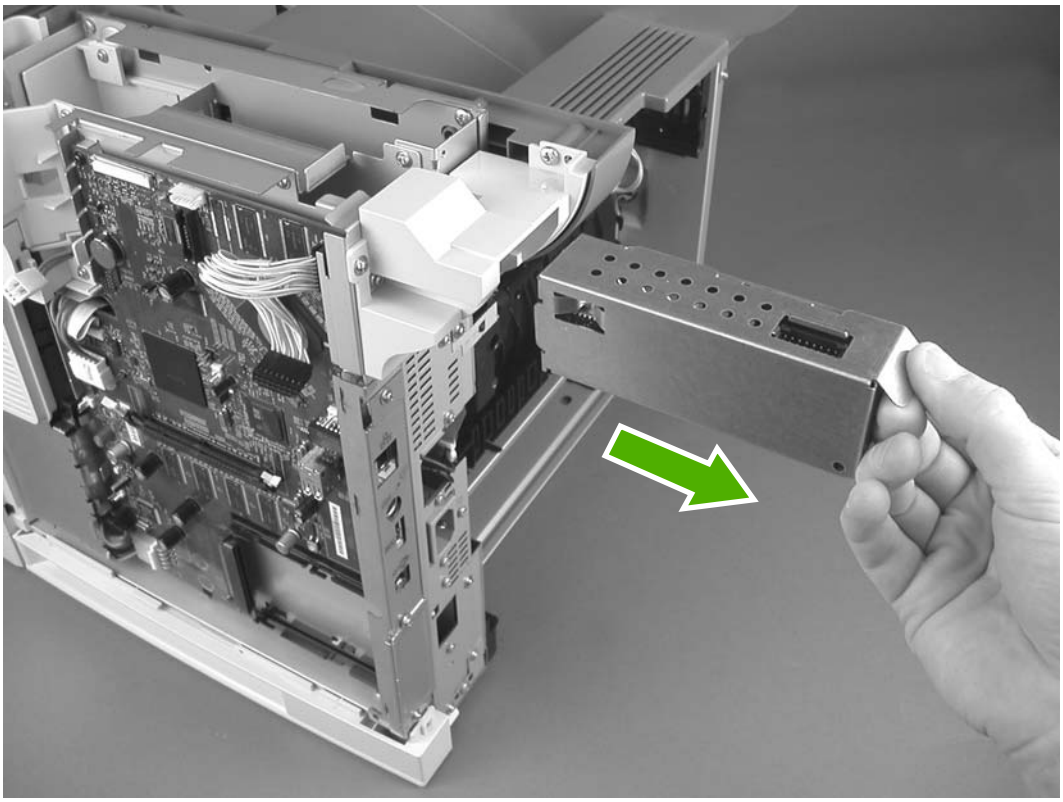
1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Fax cover (see Fax cover on page 116)
   - ADF/scanner assembly (see Scanner assembly on page 110)
2. Disconnect one cable (callout 1) from the fax accessory.

**Figure 5-32** Removing the fax accessory (1 of 2)



3. Slide the fax accessory toward the back and out of the device.

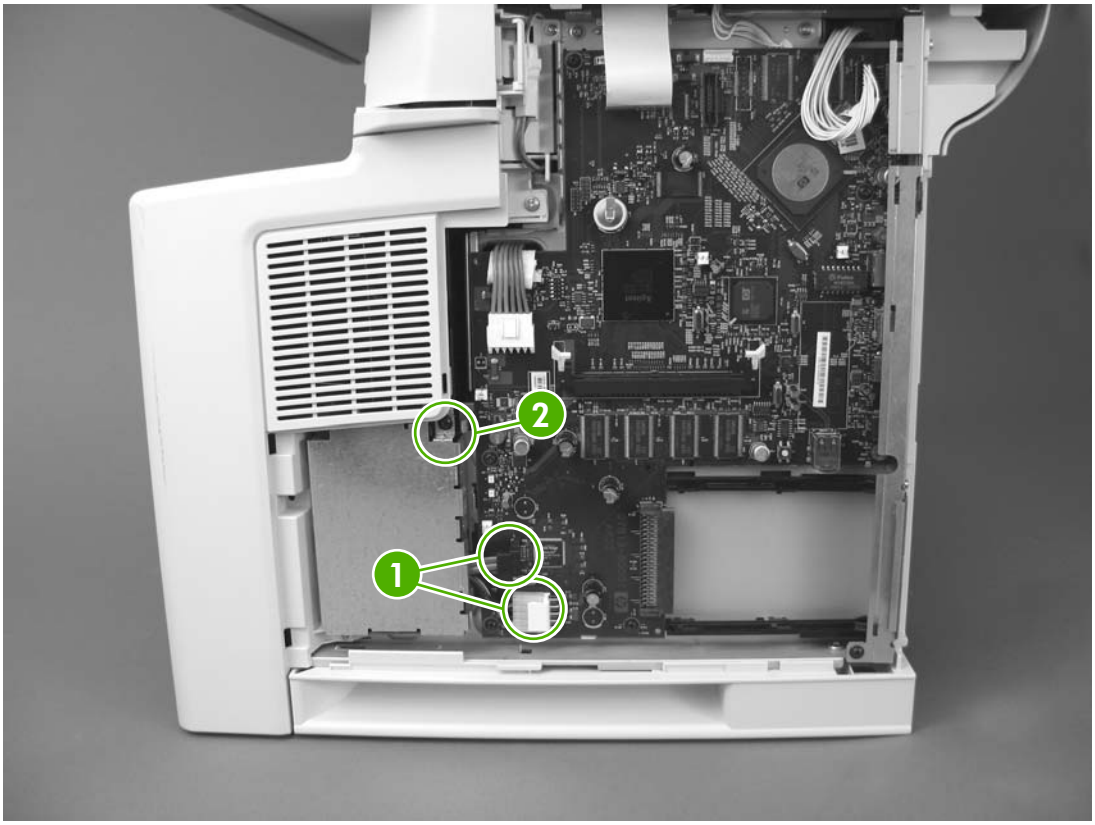
**Figure 5-33** Removing the fax accessory (2 of 2)



# Disk drive

1. Remove the right-side cover (see Right-side cover on page 114) and the formatter shield (see Formatter shield on page 115).
2. Disconnect two cables (callout 1) and remove one screw (callout 2).

**Figure 5-34** Removing the disk drive (1 of 3)



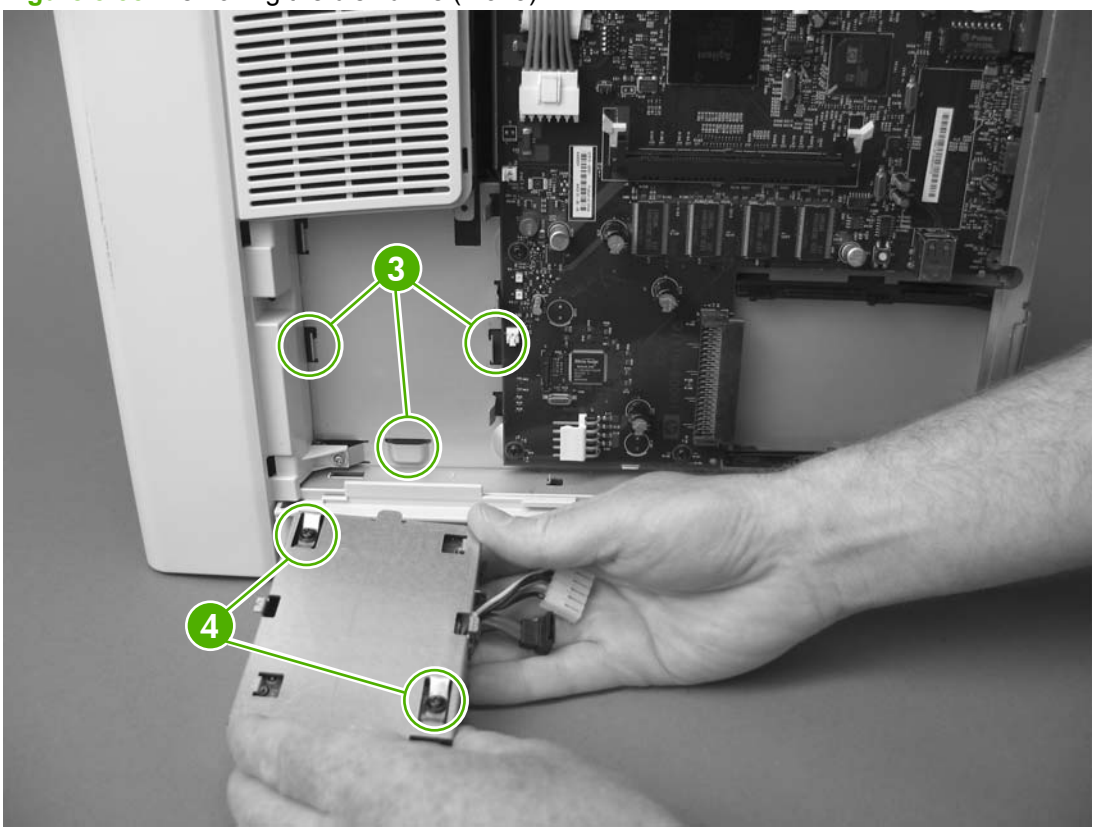

3. Slide the disk drive up slightly to clear three tabs from the tab slots (callout 3 in Figure 5-35 Removing the disk drive (2 of 3) on page 133), and then lift the disk drive away from the device.

**Reinstallation tip** Upon reinstallation, make sure that all three tabs are inserted correctly into the slots. Also make sure that the screw-hole tab on the disk drive housing is on top of the tab in the device.

**NOTE:** If you are replacing the disk drive, complete the additional steps below. If you are removing the disk drive in order to replace the formatter or other parts, there is no need to complete the remaining steps in this section.

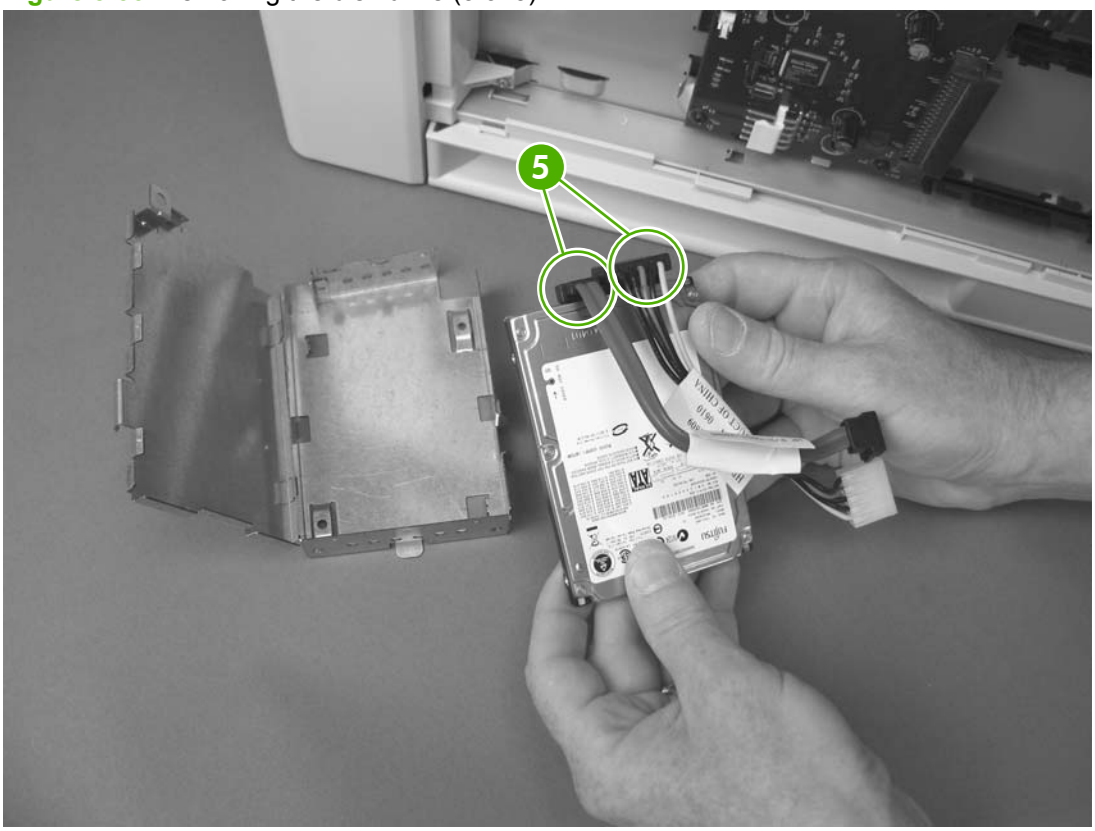
4. Remove two screws (callout 4) from the metal housing.

**Figure 5-35** Removing the disk drive (2 of 3)



5. Open the metal-housing door, remove the disk drive from the metal housing, and then disconnect two cables (callout 5).

**Figure 5-36** Removing the disk drive (3 of 3)

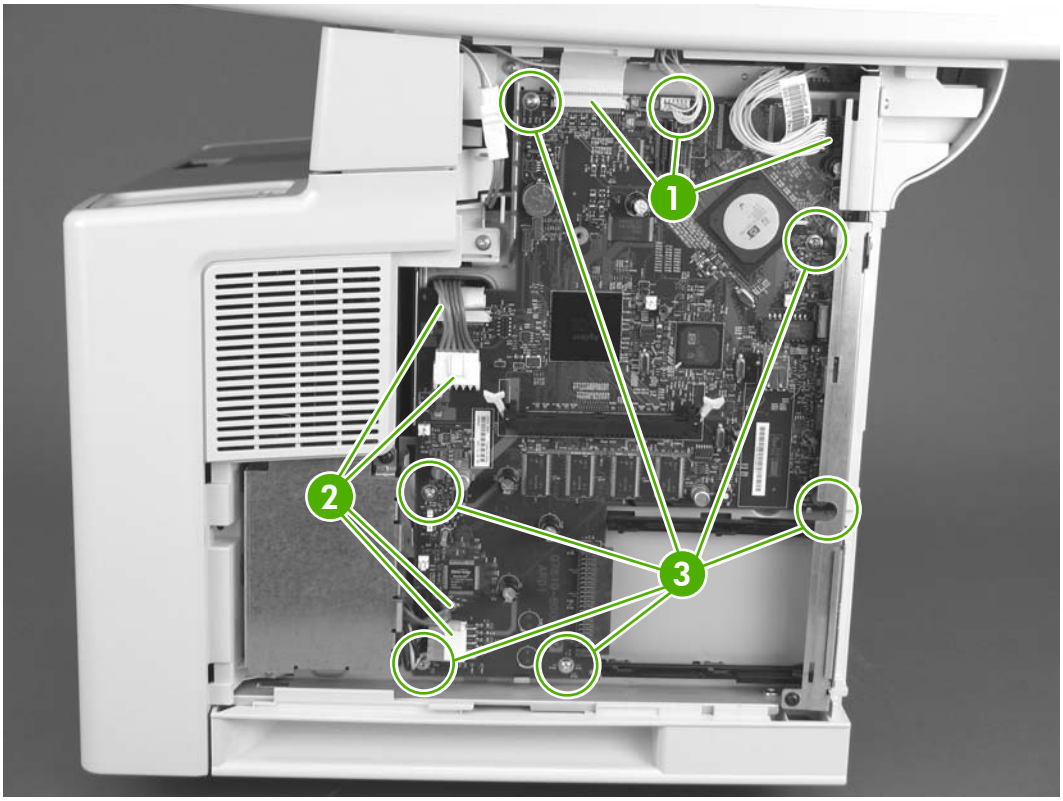


# Formatter

1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Disk drive (see Disk drive on page 132)

   **NOTE:** Removing the disk drive is not a required step. However, you might find it easier to remove the formatter if you have already removed the disk drive.
2. Disconnect three cables (callout 1) from the top of the formatter.
3. Disconnect four cables (callout 2) from the left side (toward the front of the device) of the formatter.
4. Remove six screws (callout 3).

**Figure 5-37** Removing the formatter

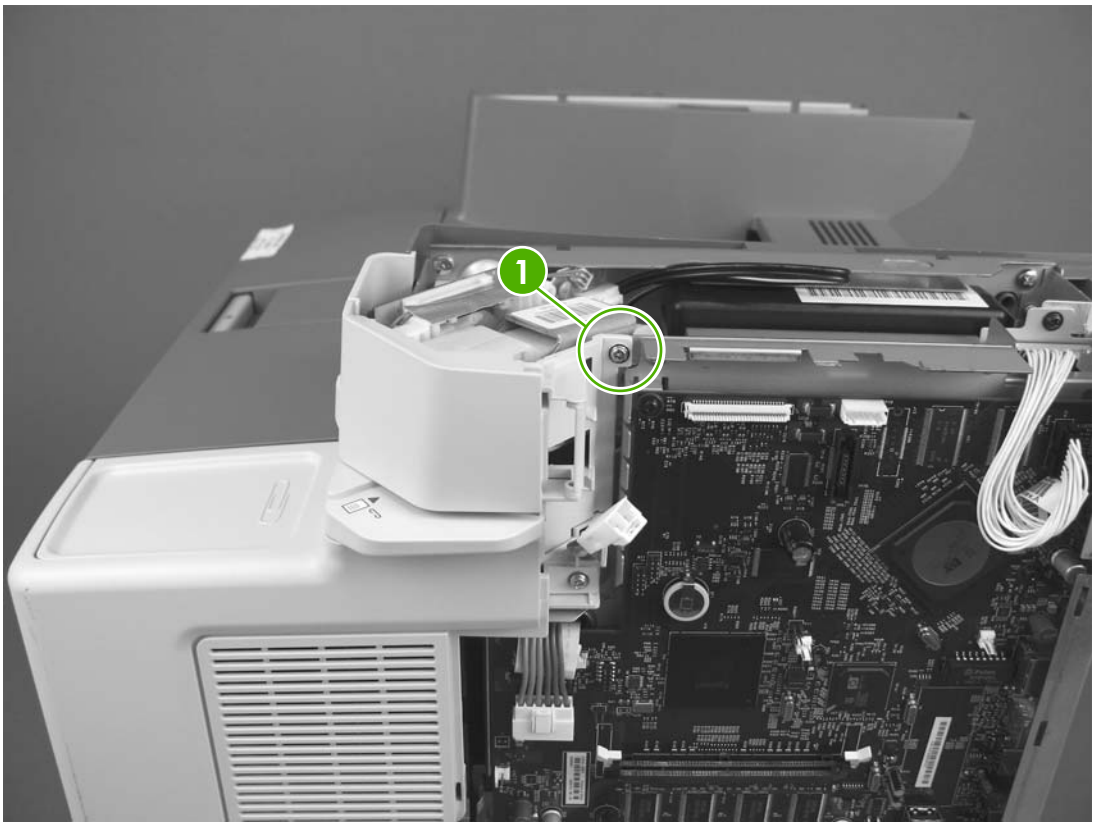



5. Lift up the formatter slightly to clear one tab at the bottom, rotate the left edge of the formatter (at the front of the device) away from the device, and then slide the formatter toward the front of the device to remove it.

# Stapler

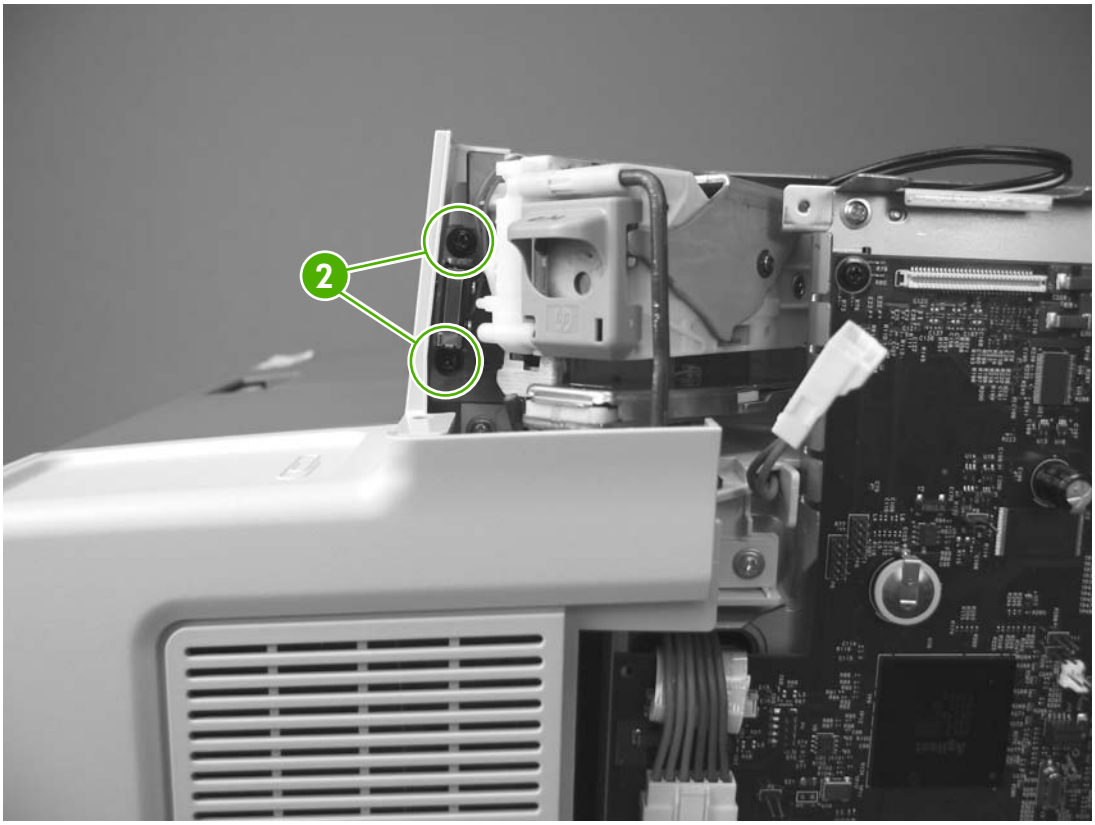
1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Fax cover (see Fax cover on page 116)
   - Left-side cover (see Left-side cover on page 117)
   - ADF/scanner assembly (see Scanner assembly on page 110)
2. Remove one screw (callout 1) from the stapler cover and then lift the cover off of the device.

**Figure 5-38** Removing the stapler (1 of 3)



3. Remove two screws (callout 2) from the stapler bracket.

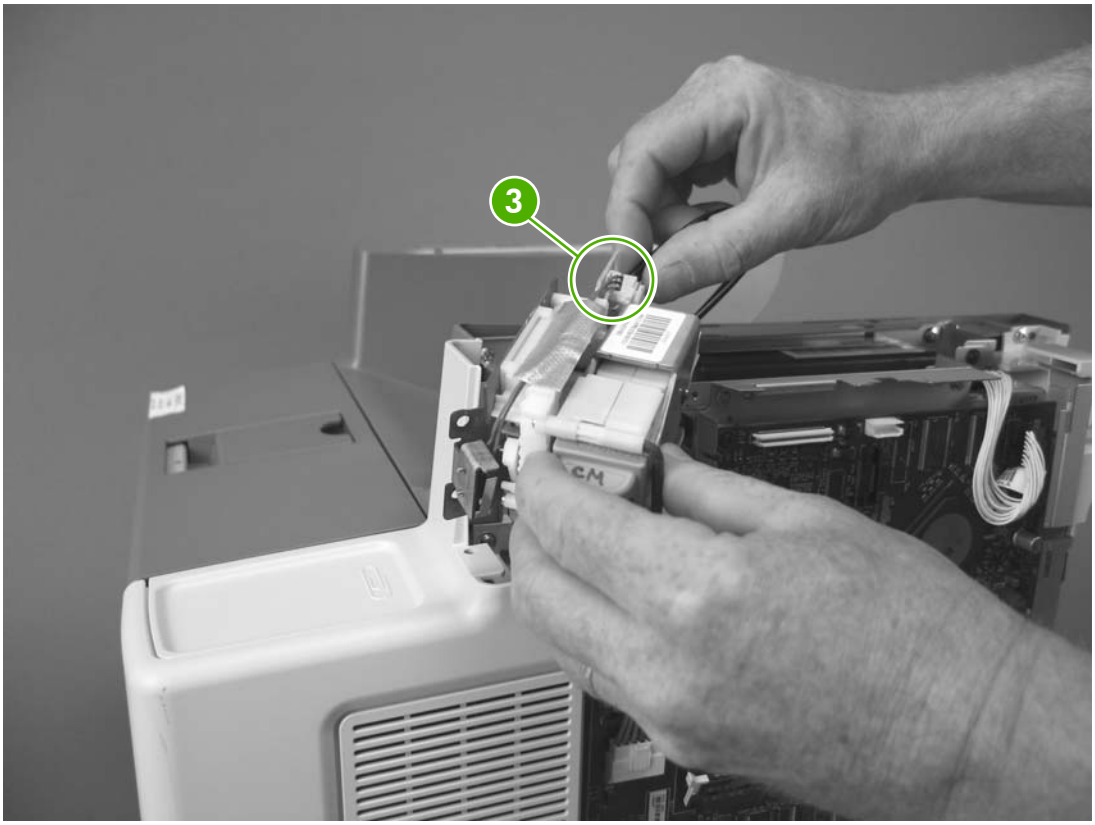
**Figure 5-39** Removing the stapler (2 of 3)




**Reinstallation tip** Be careful not to pinch the stapler cables when reinstalling and tighening the screws.

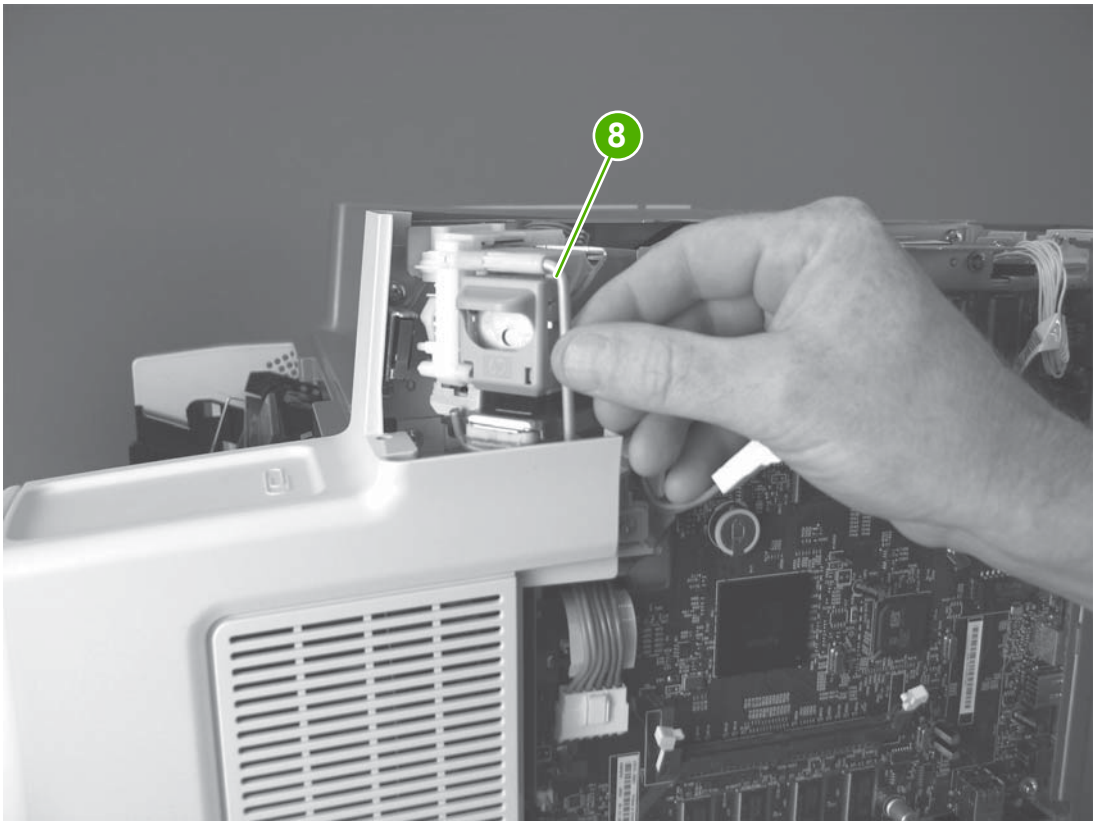
4. Lift the stapler out of the device and then disconnect one cable (callout 3) from the back of the stapler.

**Figure 5-40** Removing the stapler (3 of 3)




**Reinstallation tip** For correct placement, insert the metal tab at the back of the stapler into the slot in the chassis.

**Figure 5-41** Reinstalling the stapler

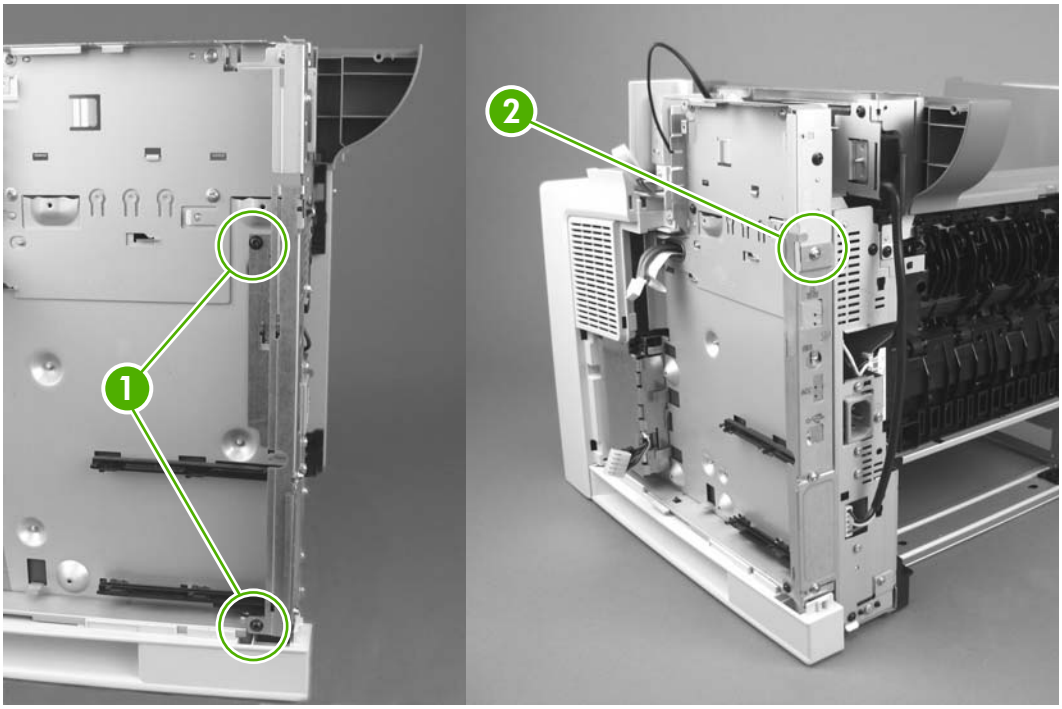



**Reinstallation tip** Make sure that the actuator rod (callout 4) is inserted into the hole in the stapler and that it moves freely.

# Stapler power-supply

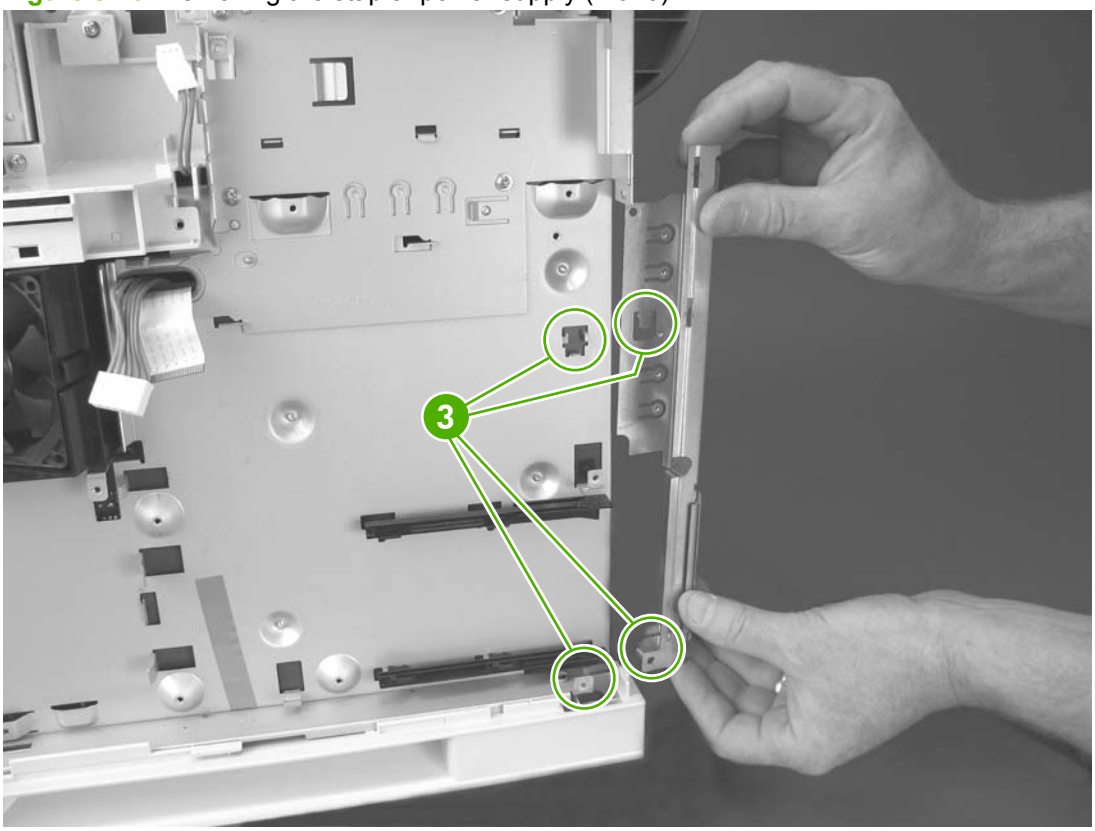
1. Remove the following components:
   - All covers except for the top cover and the right, front cover (see Covers on page 114)
   - ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136)
2. Remove two screws (callout 1) from the side of the I/O plate and one screw (callout 2) from the back of the plate.

**Figure 5-42** Removing the stapler power supply (1 of 5)



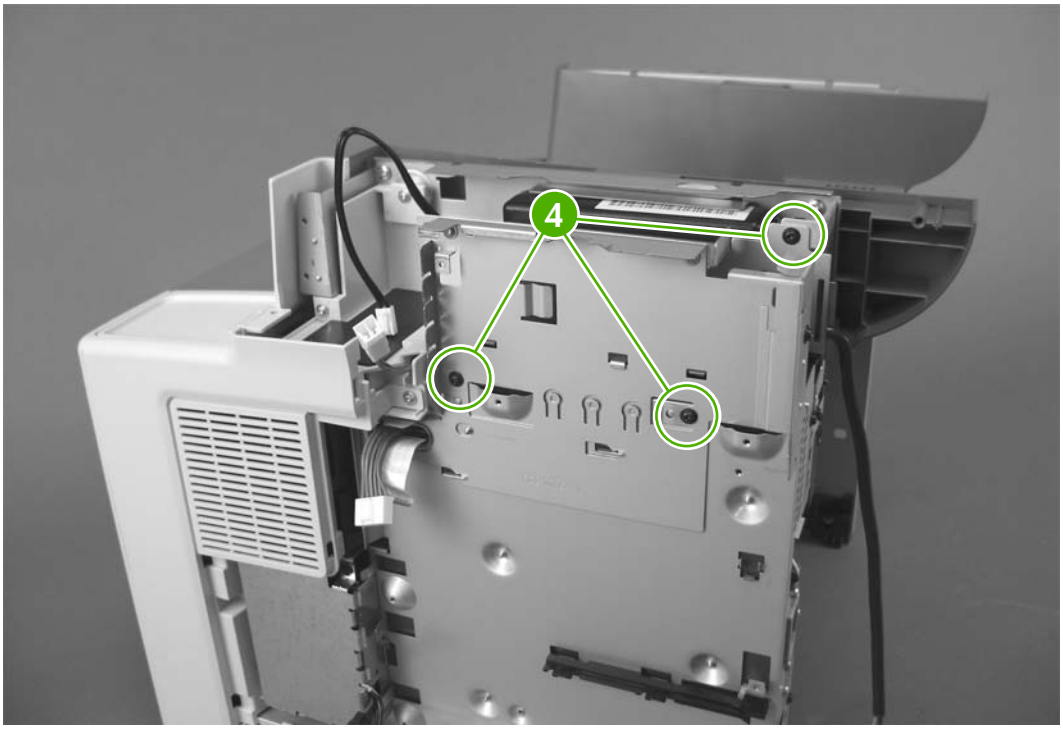
3. Lift the I/O plate up slightly to dislodge it from the tabs (callout 3) on the ECU plate, and then slide it toward the back and off of the device.

**Figure 5-43** Removing the stapler power supply (2 of 5)



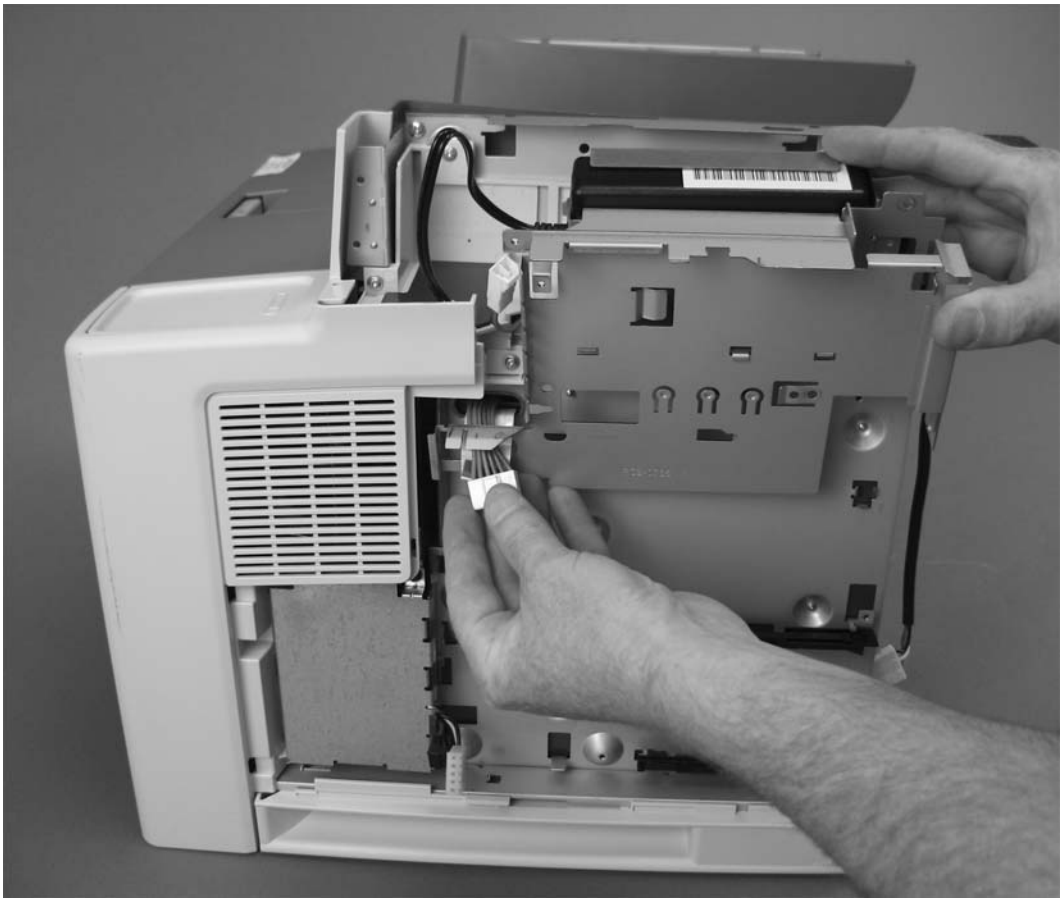
4. Remove three screws (callout 4) from the stapler-power-supply plate.

**Figure 5-44** Removing the stapler power supply (3 of 5)



5. Slide the stapler-power-supply plate toward the back of the device until it stops, and then guide cables through a hole in the stapler-power-supply plate while lifting the plate straight away from the device.

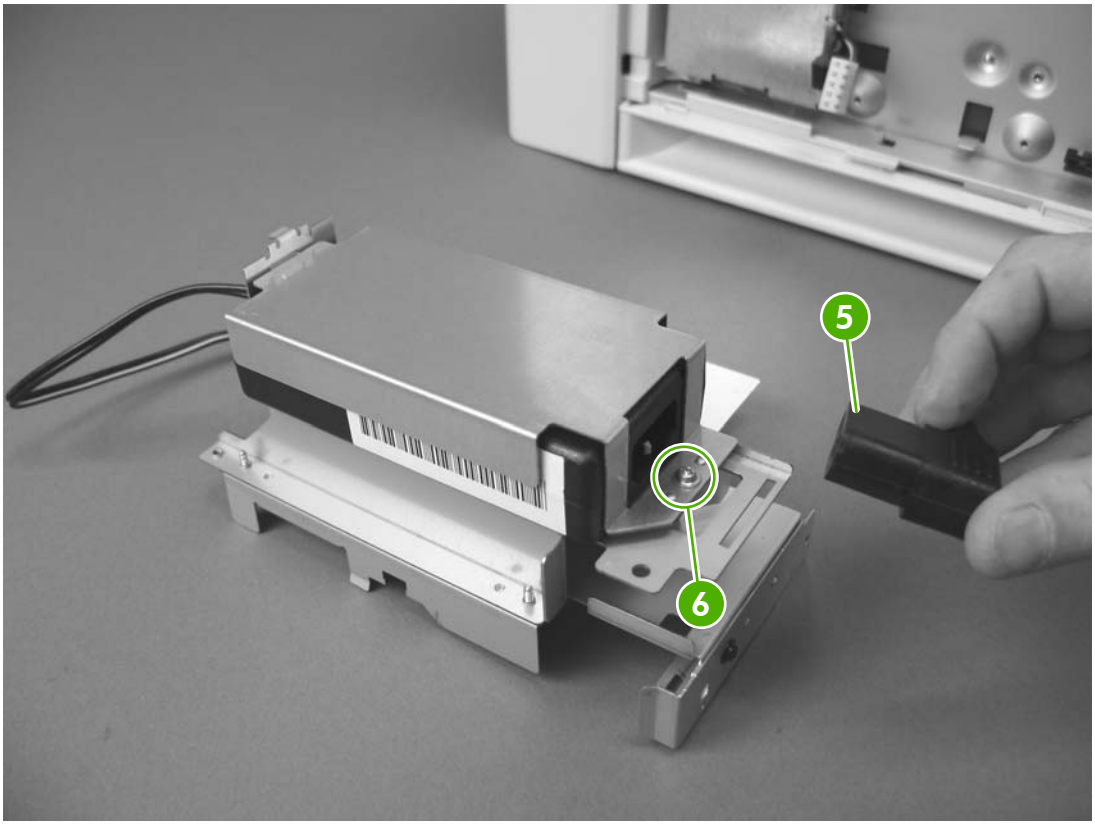
**Figure 5-45** Removing the stapler power supply (4 of 5)



**Reinstallation tip** Guide the cables through the hole in the stapler-power-supply plate before attaching the plate.

6. Unplug the power-supply cable (callout 5) and then remove one screw (callout 6) to release the power-supply cover.

**Figure 5-46** Removing the stapler power supply (5 of 5)

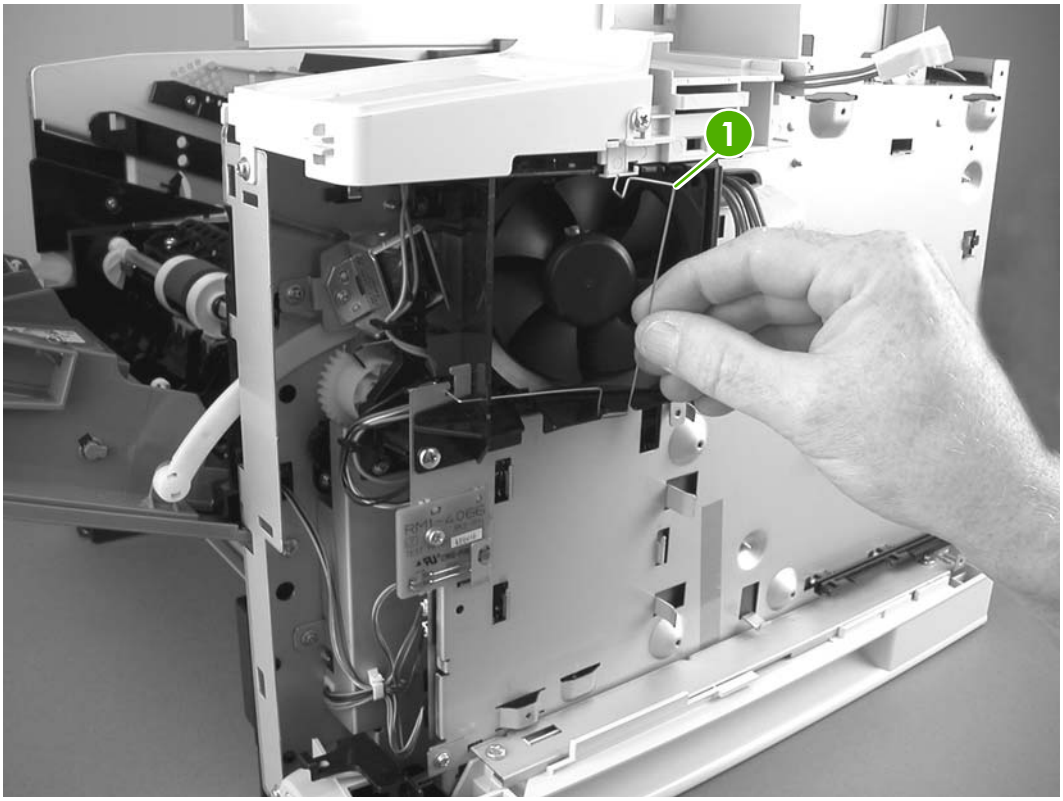



7. Lift the cover off of the power supply and then lift the power supply off of the plate.

# Right-side fan

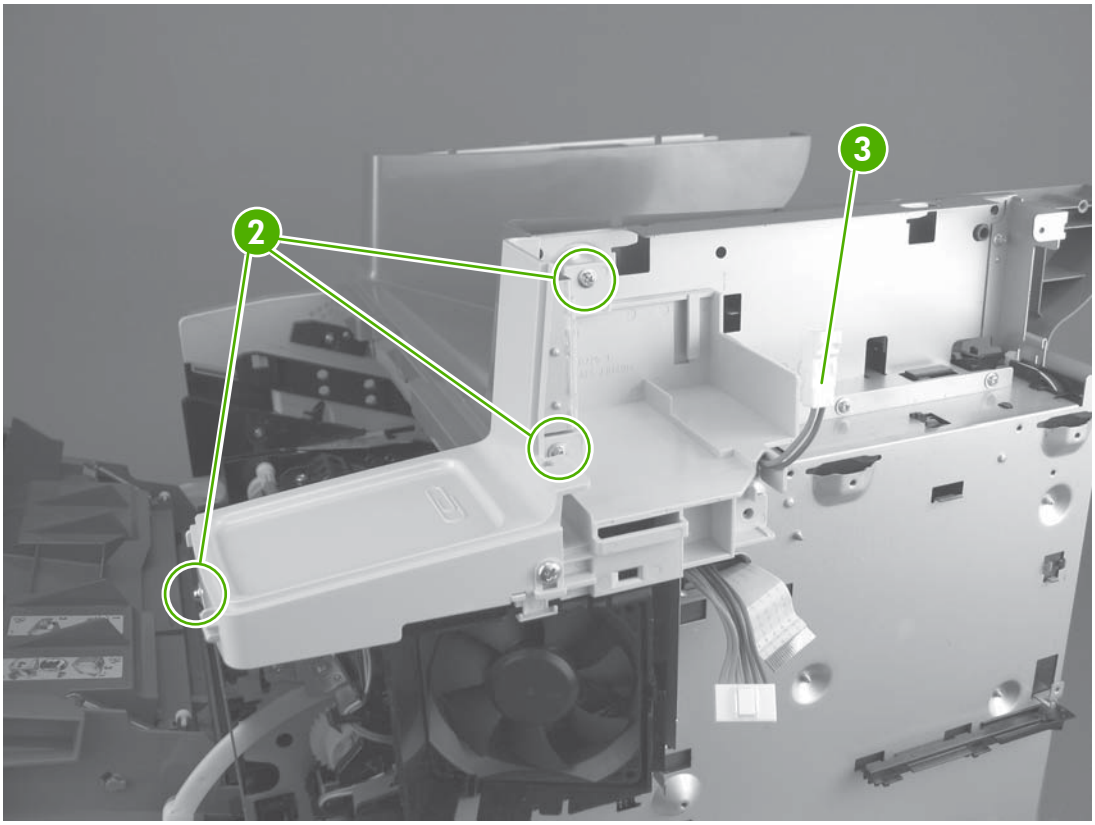
1. Remove the following components:
   - All covers except for the top cover (see Covers on page 114)
   - ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
2. Remove the grounding wire (callout 1) from the fan housing.

**Figure 5-47** Removing the right-side fan (1 of 3)



3. Remove three screws (callout 2) from the clip-tray/stapler housing assembly and then lift the assembly off of the device.

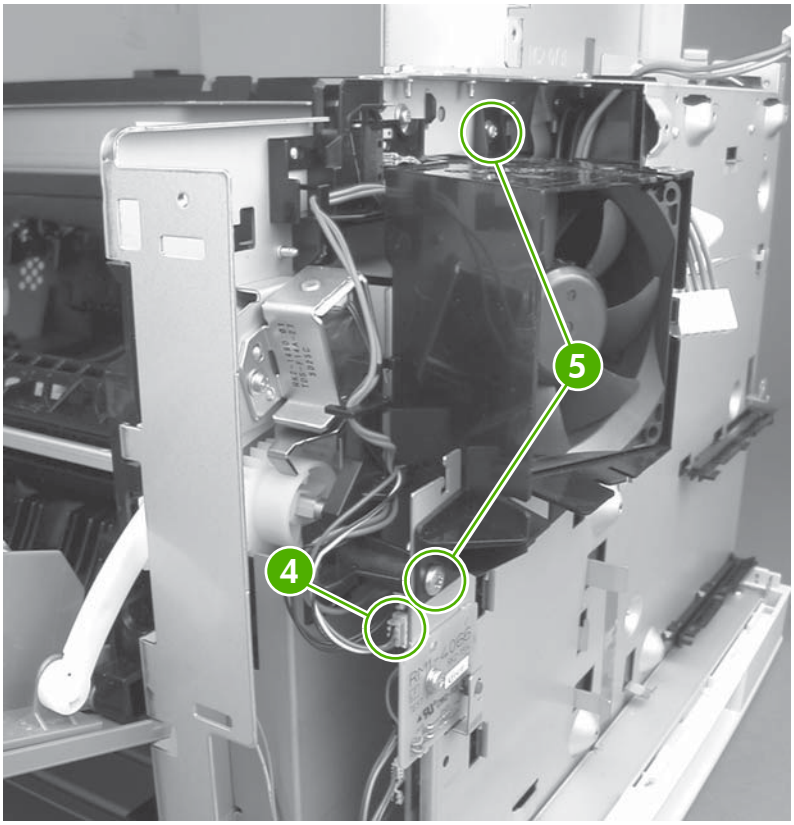
**Figure 5-48** Removing the right-side fan (2 of 3)




**Reinstallation tip** When reinstalling the clip-tray/stapler-housing assembly, route the scanner power cable (callout 3) through an opening in the assembly.

4. Disconnect the fan cable (callout 4) at the ECU and then remove two screws (callout 5).

**Figure 5-49** Removing the right-side fan (3 of 3)

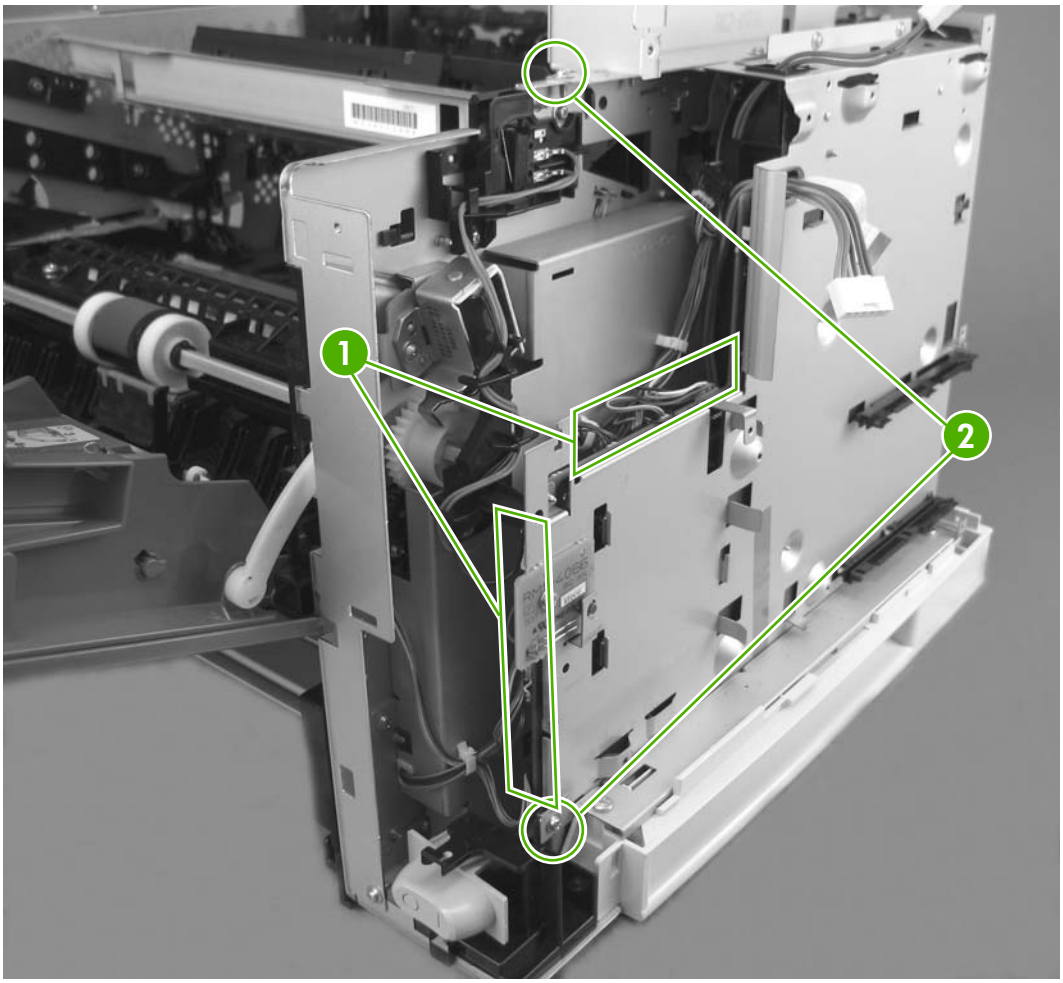



5. Slide the fan out of the device.

# Engine control unit (ECU)

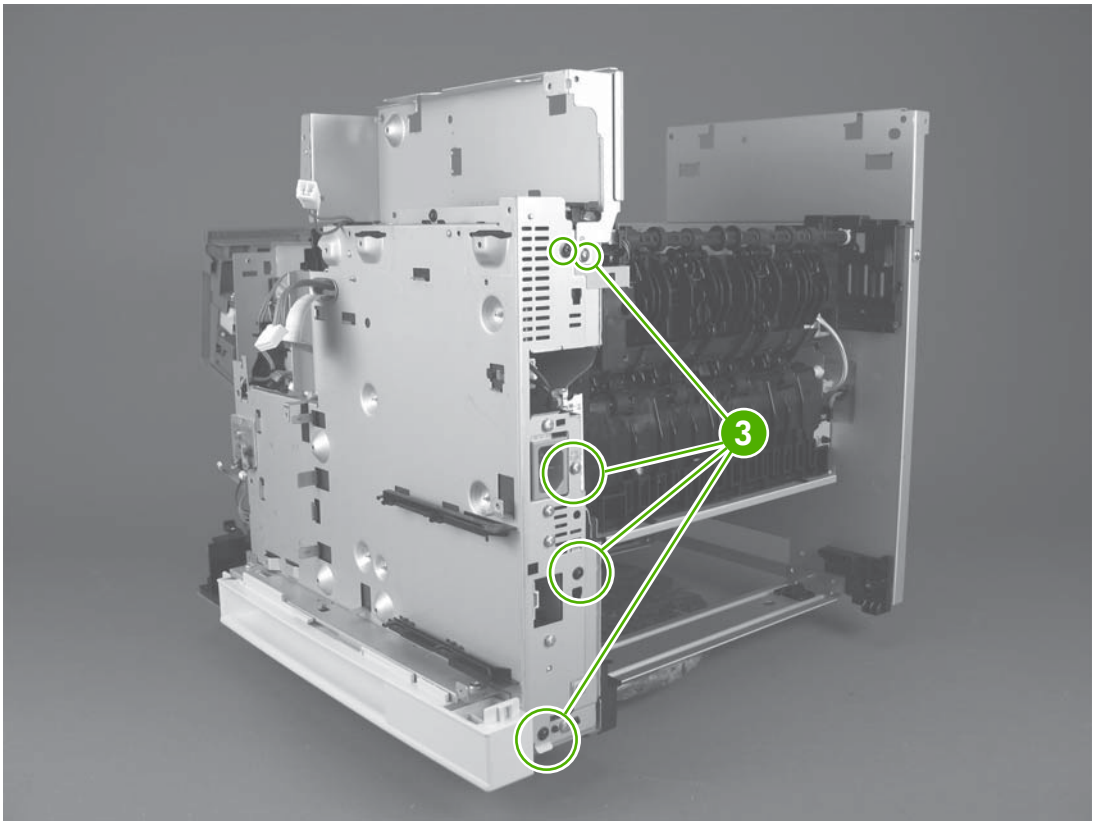
1. Remove the following components:
   - All of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - Right-side fan (see Right-side fan on page 145)
2. Disconnect ten cables (callout 1) from the ECU.
3. Remove two screws (callout 2—one from the right-side riser and one from the ECU plate).

**Figure 5-50** Removing the ECU (1 of 6)



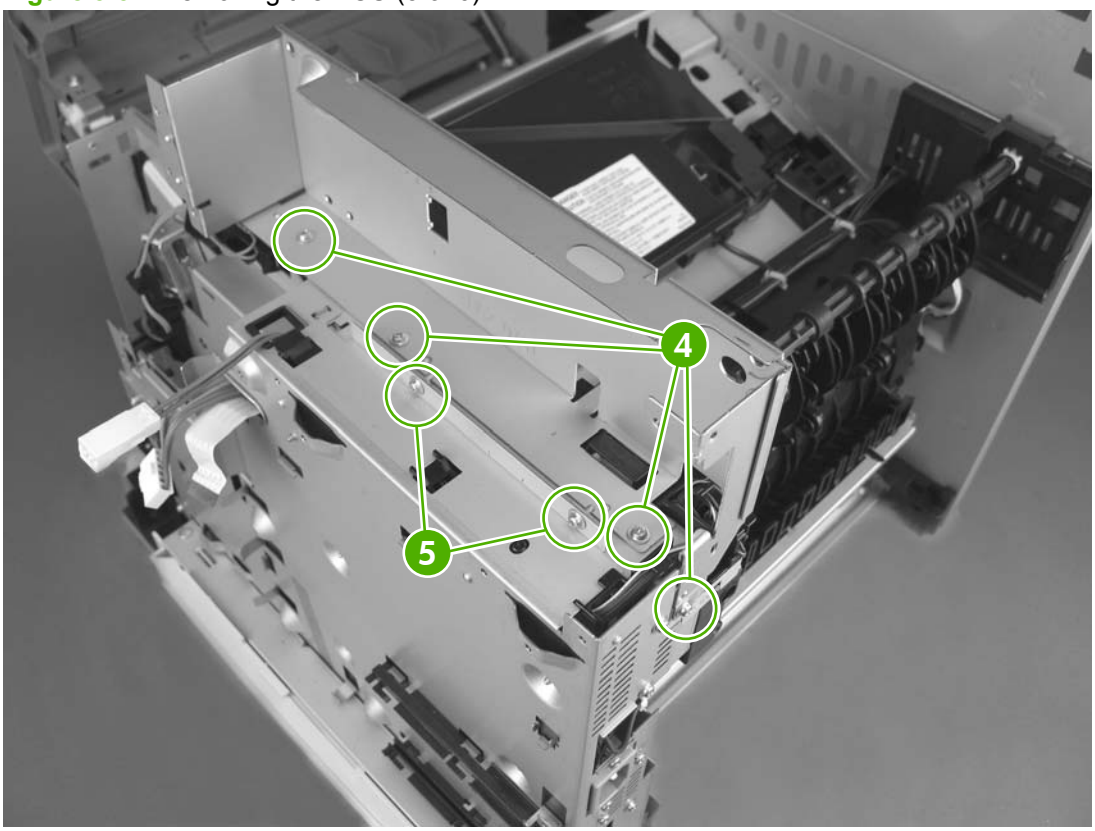
4. Remove five screws (callout 3) at the back of the device.

**Figure 5-51** Removing the ECU (2 of 6)



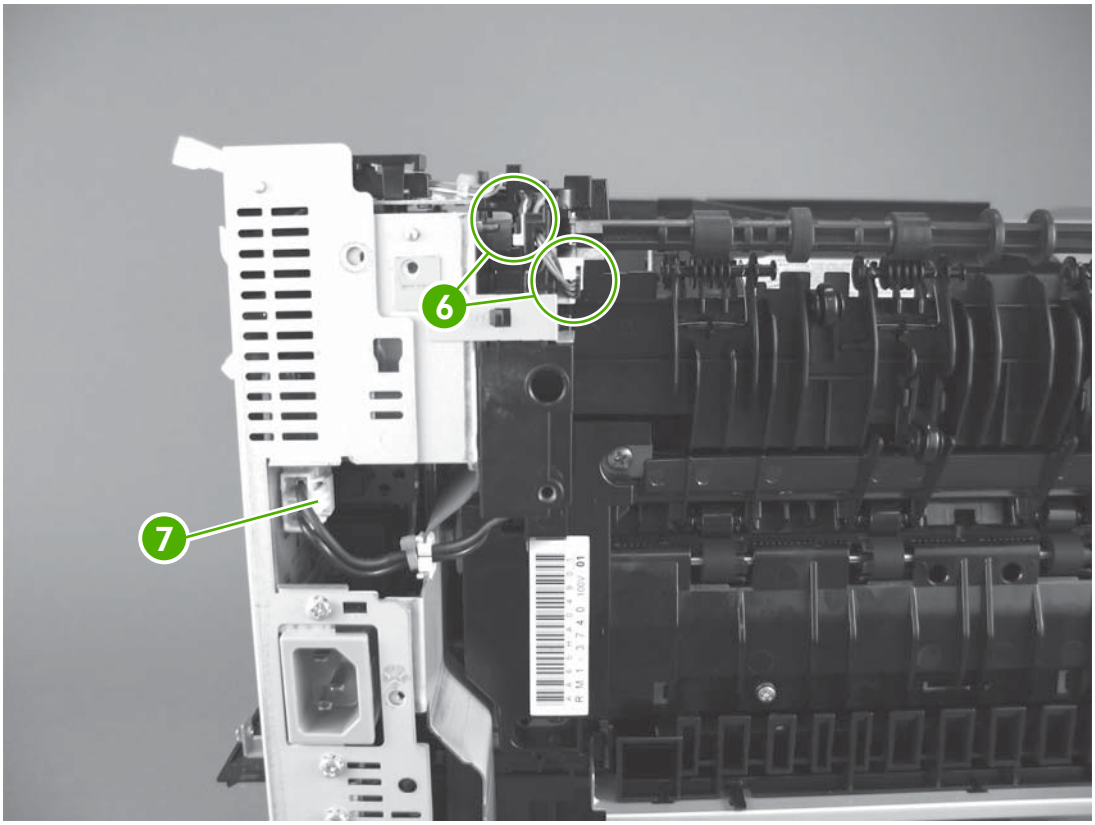
5. Remove four screws (callout 4) from the right-side riser and then lift the riser off of the device. Also remove two screws (callout 5) from the ECU plate.

**Figure 5-52** Removing the ECU (3 of 6)



6. Disconnect two sensor cables (callout 6) and the fuser power cable (callout 7).

**Figure 5-53** Removing the ECU (4 of 6)



7. Unplug the laser/scanner ribbon cable (callout 8) from the laser/scanner and disconnect one inline connector (callout 9). Then, unwind the front-door microswitch cable from the cable guides and then remove the microswitch (callout 10) from its housing.

**Figure 5-54** Removing the ECU (5 of 6)

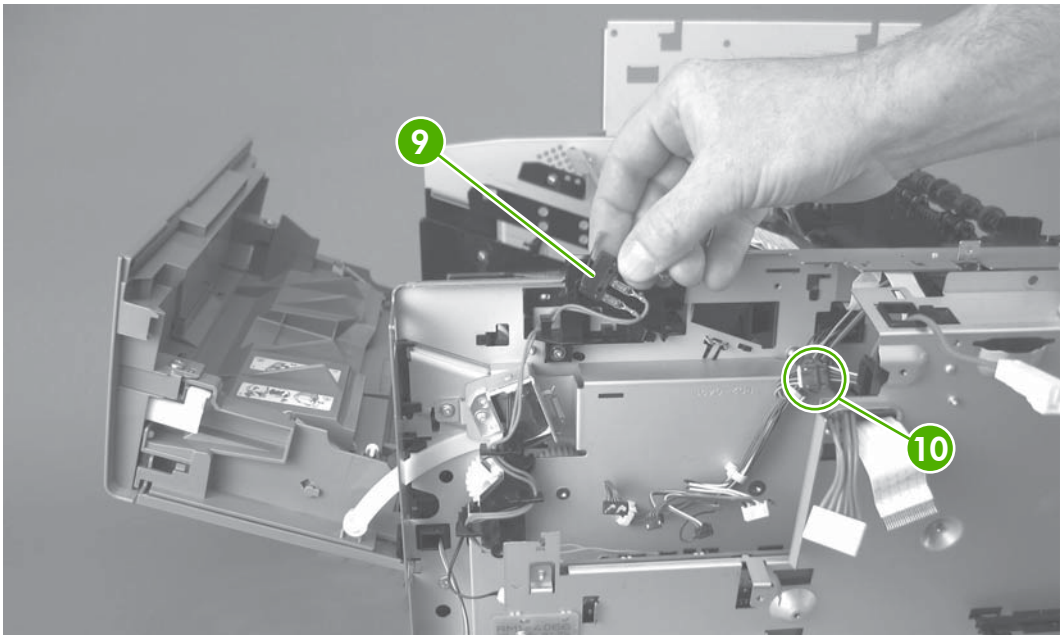
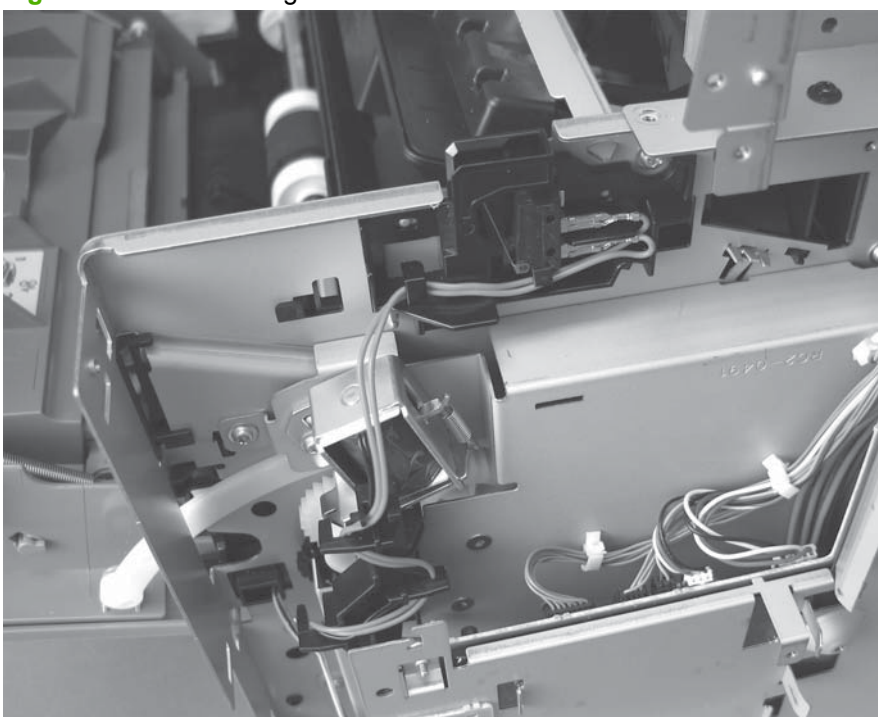


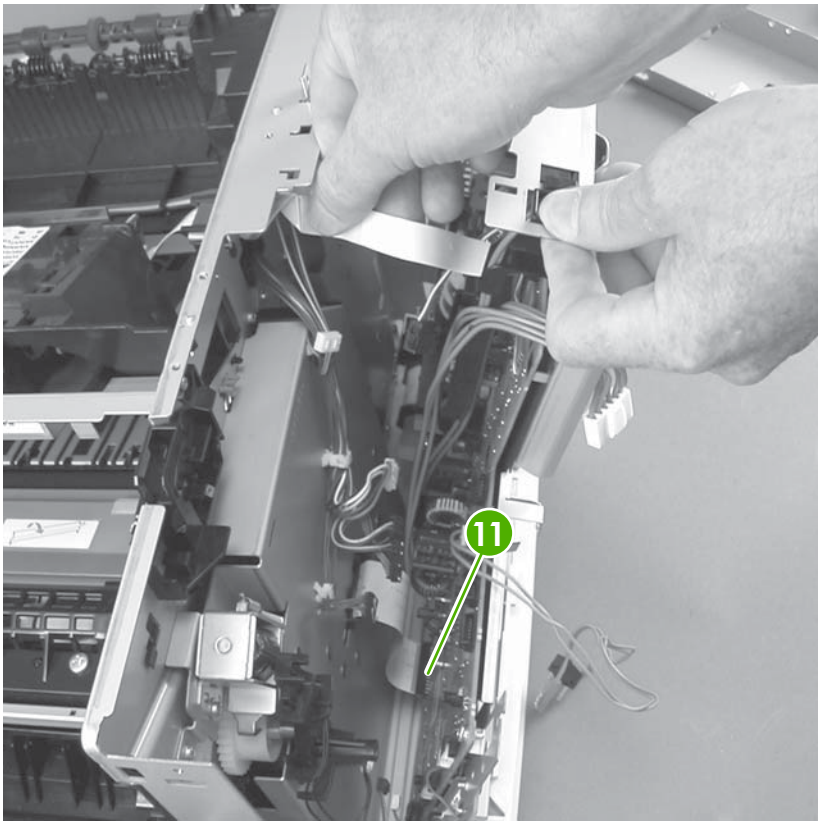

**Figure 5-55** Reinstalling the front-door microswitch cable



**Reinstallation tip** Upon reinstallation, replace the microswitch in its housing and then route the cable as shown in Figure 5-55 Reinstalling the front-door microswitch cable on page 152.

8. Lift up the ECU slightly and rotate the top of the ECU away from the device. After it is rotated, disconnect one ribbon cable (callout 11) from the ECU.

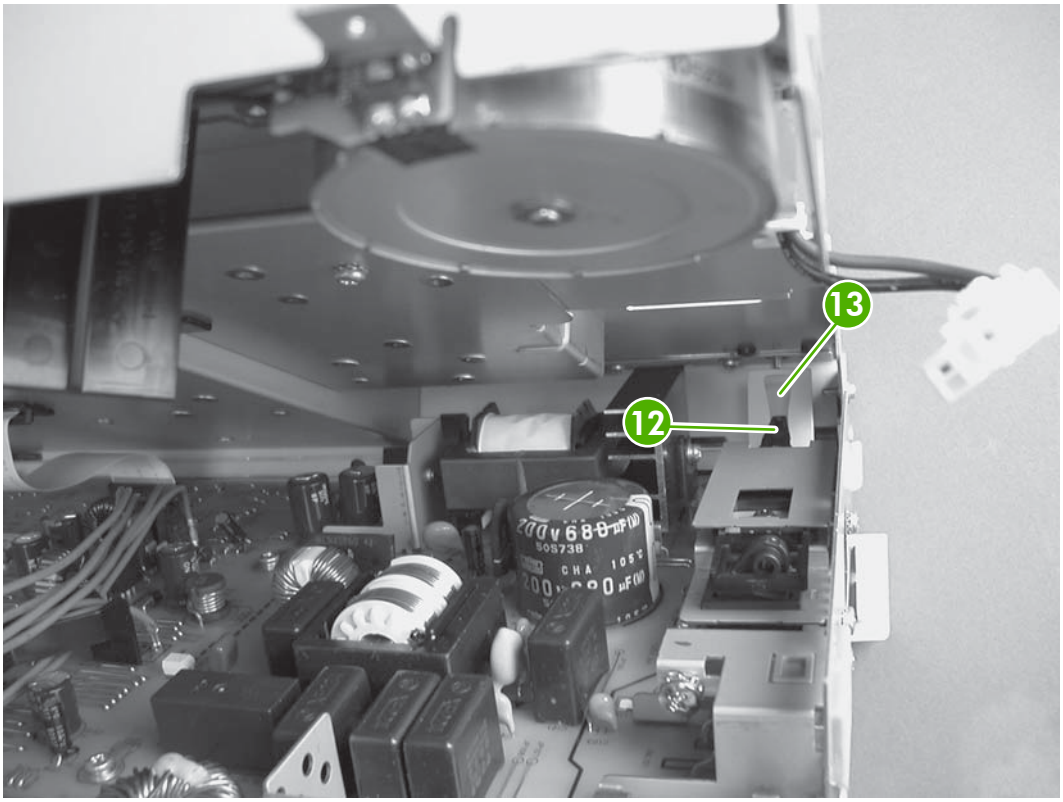
**Figure 5-56** Removing the ECU (6 of 6)




9. Lift the ECU off of the device.

**NOTE:** The ECU and the ECU pan together are a single FRU. You do not have to separate the ECU and the ECU pan.

**Figure 5-57** Reinstalling the ECU

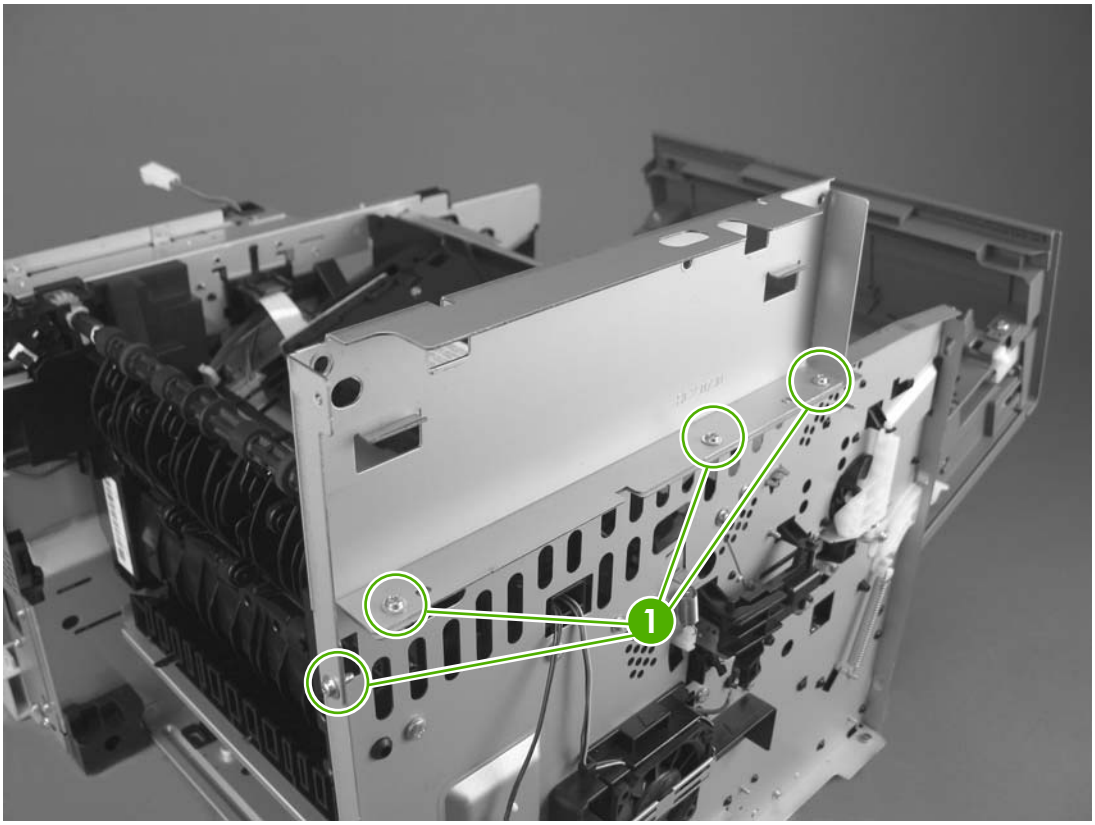



**Reinstallation tip** Make sure that the power switch (callout 12) fits into the correct position in the switch link (callout 13).

# Left-side riser

1. Remove all covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
2. Remove four screws (callout 1).

**Figure 5-58** Removing the left-side riser

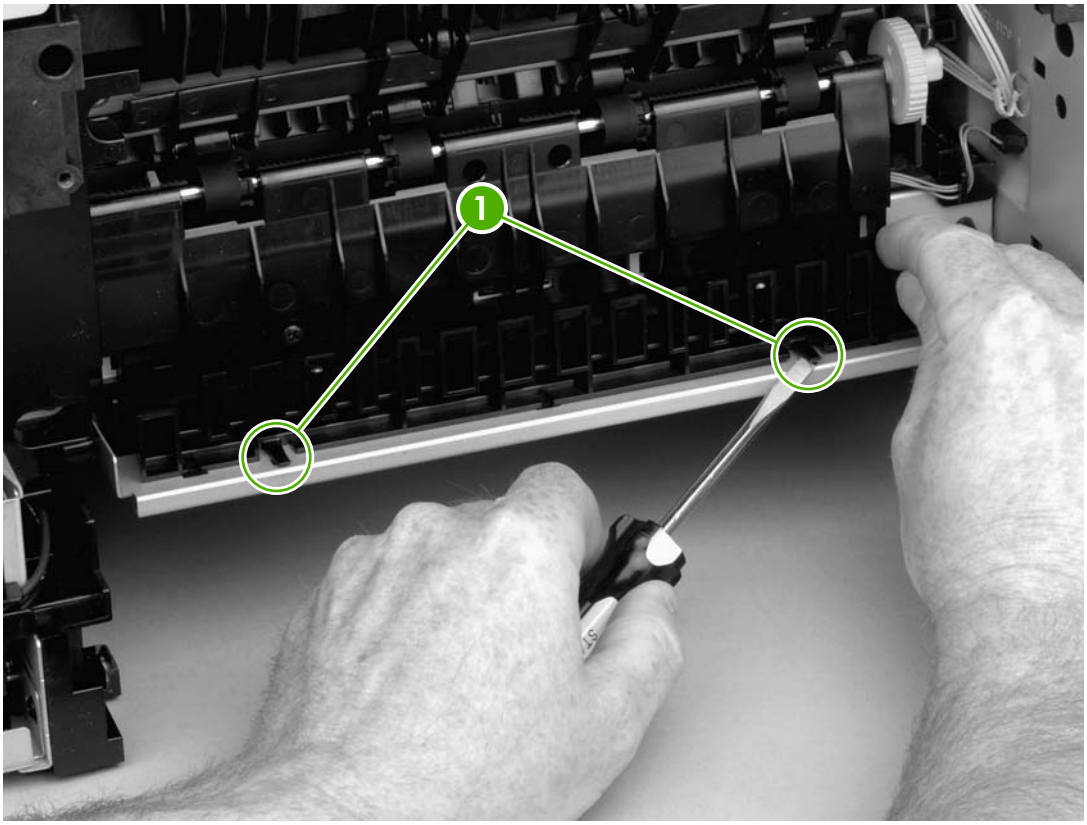



3. Lift the left-side riser off of the device.

# Fuser

1. Remove the back cover (see Back cover on page 120) and the I/O cover (see I/O cover on page 122).
2. Remove the duplexer inlet guide by releasing two tabs (callout 1) on the guide, and then sliding the guide toward the back of the device.

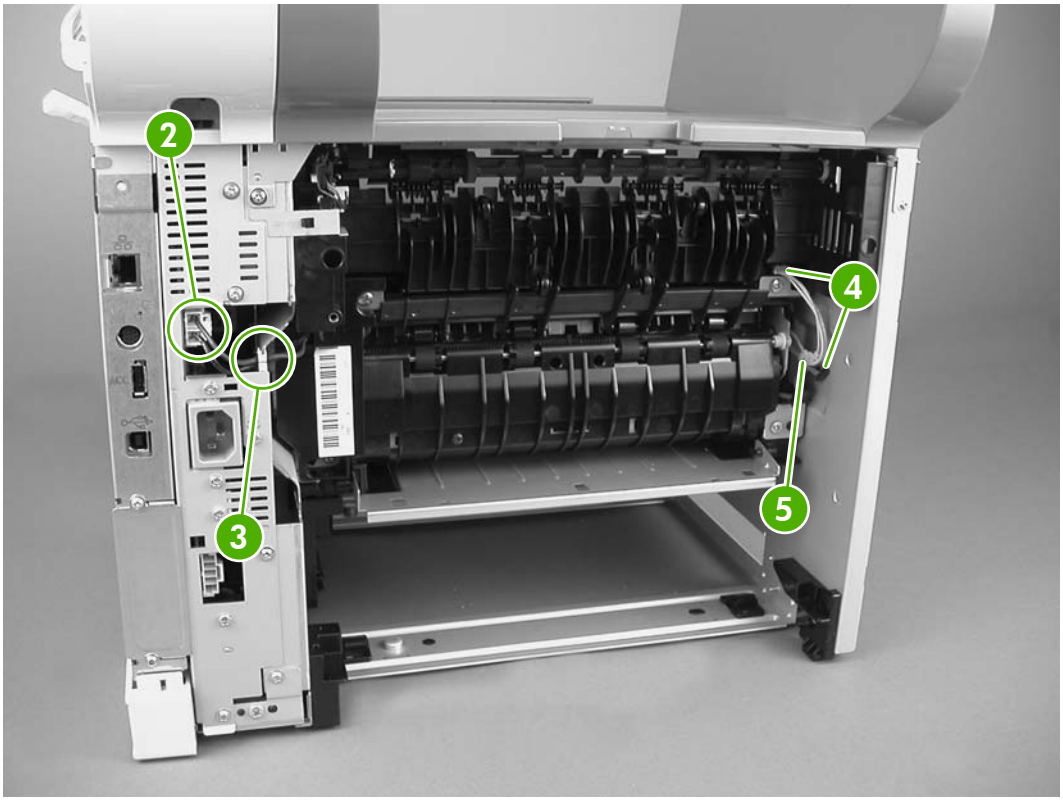
**Figure 5-59** Removing the fuser (1 of 3)




**Reinstallation tip** Make sure that both tabs snap into place when reinstalling the duplexer inlet guide.

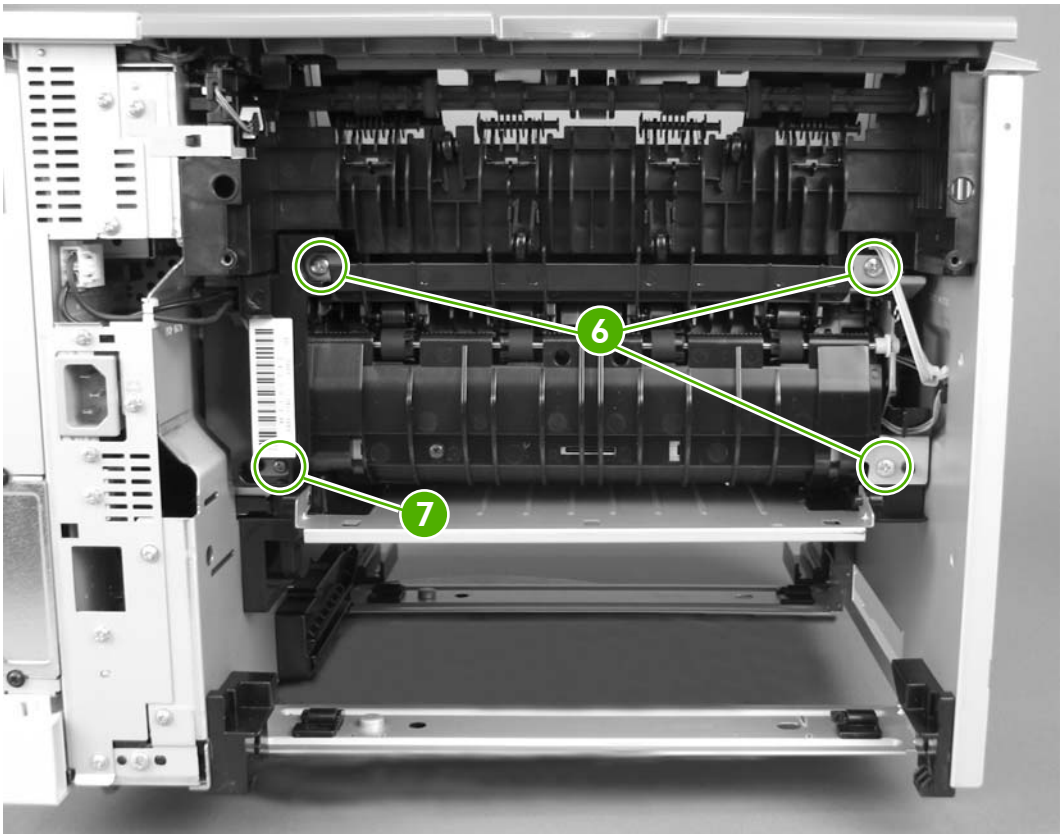
3. Disconnect the fuser power cable (callout 2) and remove the cable from the cable guide (callout 3). Also disconnect two cables (callout 4) at the right side of the fuser and remove one of the cables from the cable guide (callout 5).

**Figure 5-60** Removing the fuser (2 of 3)



4. Remove three self-tapping screws (callout 6) and one grounding screw (callout 7).

**Figure 5-61** Removing the fuser (3 of 3)

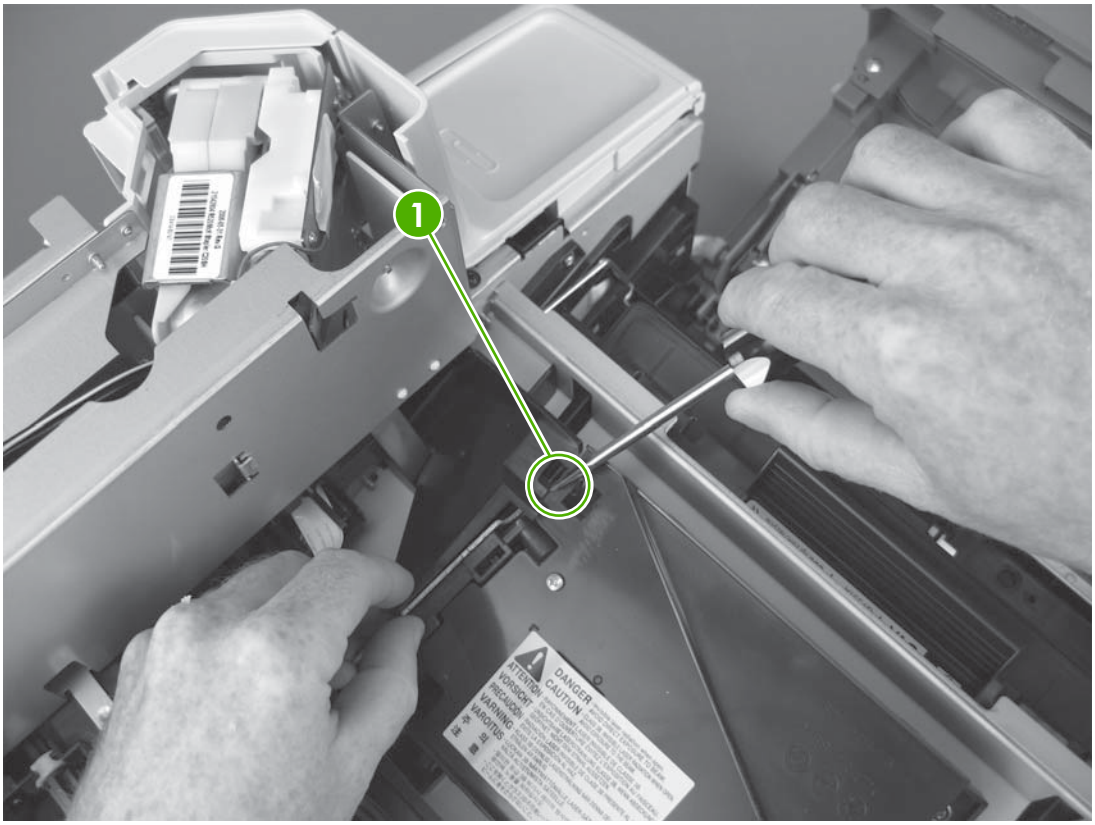



5. Tilt the fuser slightly toward the back of the device, and then slide the fuser out of the back of the device.

# Laser/scanner

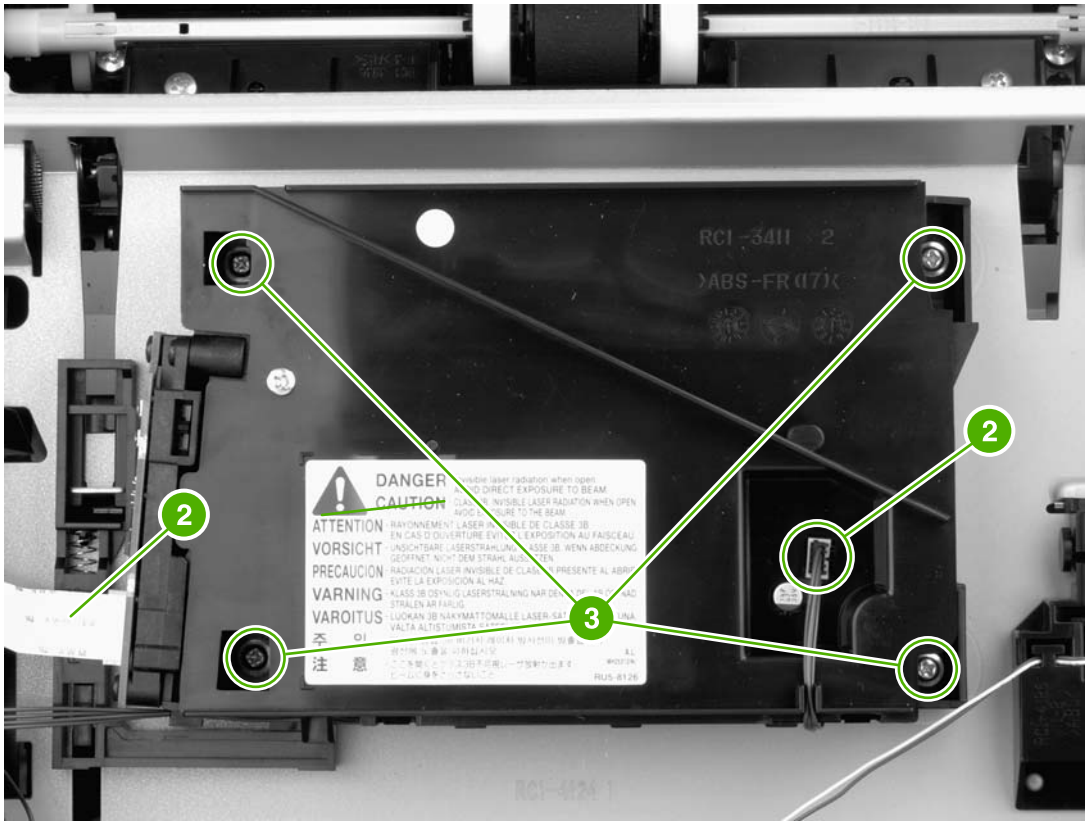
1. Remove all covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110).
2. Release one tab (callout 1) on the air duct, and then lift the air duct out of the device.

**Figure 5-62** Removing the laser/scanner (1 of 2)



3. Disconnect two cables (callout 2) and then remove four screws (callout 3).

**Figure 5-63** Removing the laser/scanner (2 of 2)

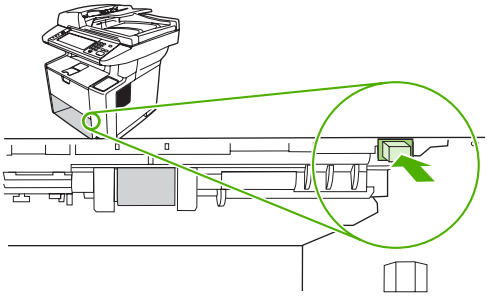



4. Lift the laser/scanner out of the device.

# Access plate

1. Remove the following components:
   - Left-side cover (see Left-side cover on page 117)
   - Back cover (see Back cover on page 120)
   - I/O cover (see I/O cover on page 122)
   - Duplexer inlet guide (see Figure 5-59 Removing the fuser (1 of 3) on page 156)
2. At the front of the device, push the green button on the top, right front of the tray 2 opening to release the access plate.

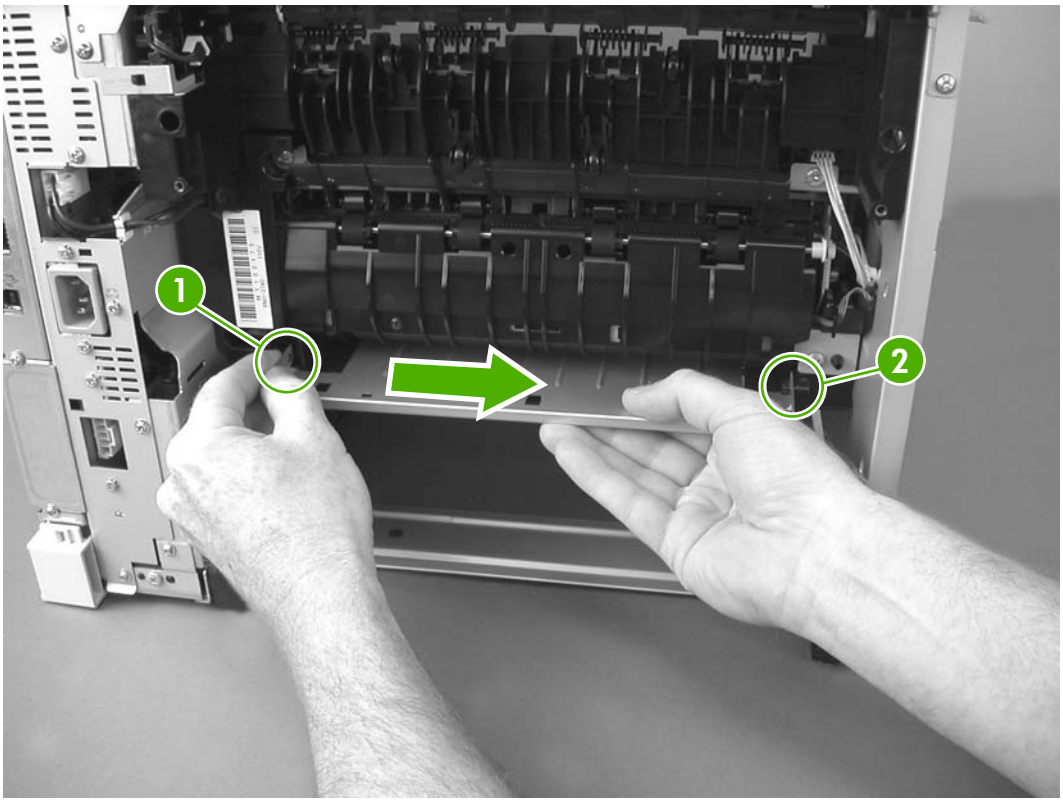
**Figure 5-64** Removing the access plate (1 of 2)



3. At the back of the device, press one tab (callout 1) to release the access plate, and then lower the access plate until the other side slides off of the other tab (callout 2).

**NOTE:** You might have to pry the tab with a flat-blade screwdriver. If you bend the tab, straighten the tab before you reinstall the plate.

**Figure 5-65** Removing the access plate (2 of 2)




4. Slide the plate out of the device.

**CAUTION:** Make sure that you do not damage the spring that is attached to the plate.

# Oblique-roller assembly

1. Remove the following components:
   - Left-side cover (see Left-side cover on page 117)
   - Back cover (see Back cover on page 120)
   - I/O cover (see I/O cover on page 122)
   - Duplexer inlet guide (see Figure 5-59 Removing the fuser (1 of 3) on page 156)
   - Access plate (see Access plate on page 161)
2. At the bottom of the device, remove the two screws (callout 1) that secure the oblique-roller assembly to the device, and then lift the assembly from the device.

**Figure 5-66** Removing the oblique-roller assembly

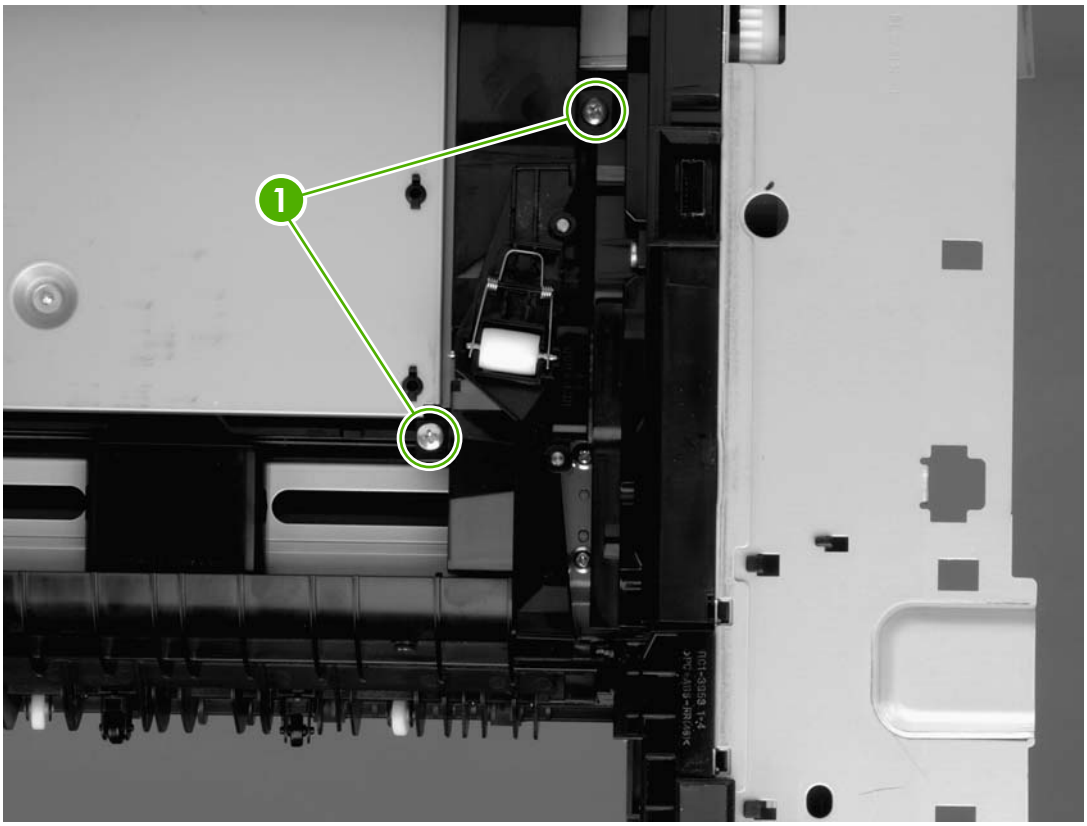
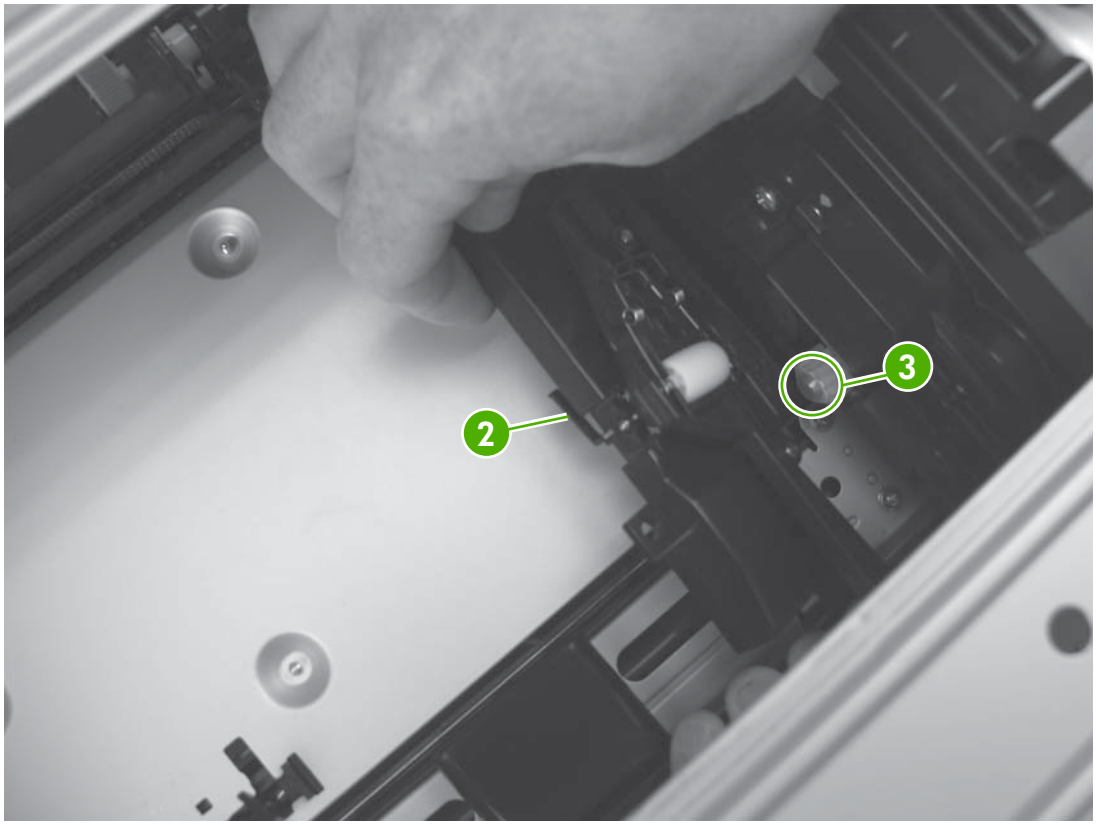



**Figure 5-67** Reinstalling the oblique-roller assembly



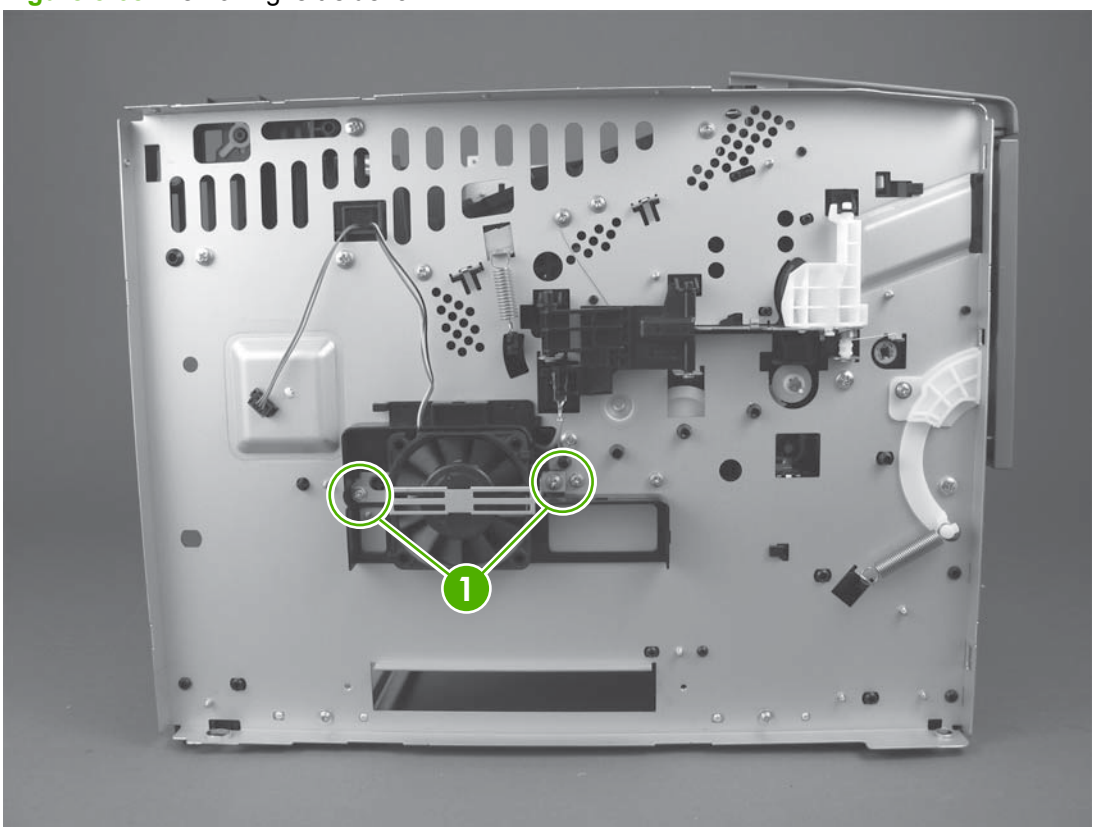

**Reinstallation tip** To reinstall the oblique-roller assembly, first make sure that the tab (callout 2) is parallel to the assembly. Then line up the the roller shaft (callout 3) with its hole on the assembly and rotate the assembly into place. Rotate the roller toward the back of the device to align the gears.

# Left-side fan

1. Remove all of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110).
2. Disconnect the left-side-fan cable from the ECU.
3. Remove two screws (callout 1) at the left side of the device and then lift the fan plate and fan straight away from the hole in the chassis.

**NOTE:** Do not disconnect the left-side-fan cable from the fan. Instead, unroute the fan cable starting at the ECU connector.

**Figure 5-68** Removing left-side fan



# High-voltage power supply (HVPS)

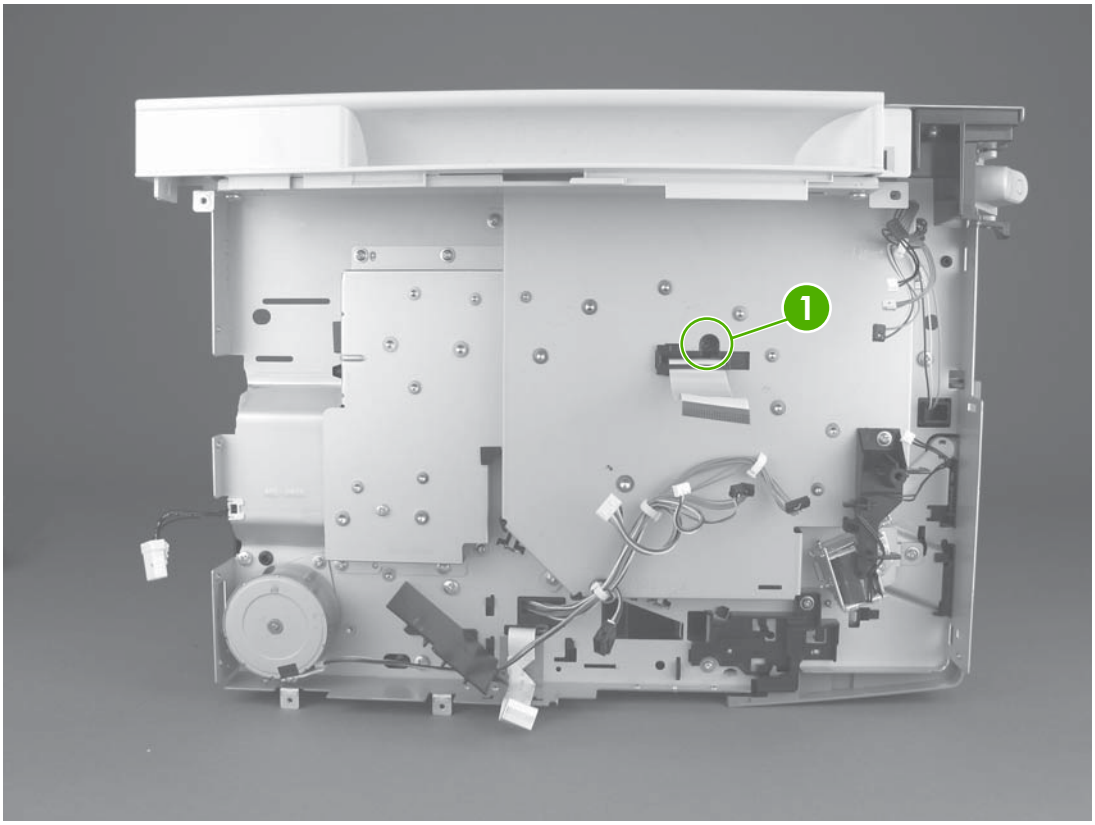
1. Remove the following components:
   - All covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - ECU (see Engine control unit (ECU) on page 148)
   - Left-side riser (see Left-side riser on page 155)
   - Access plate (see Access plate on page 161)
   - Oblique-roller assembly (see Oblique-roller assembly on page 163)
   - Left-side fan (see Left-side fan on page 165)

   **TIP:** You do not have to unroute the left-side-fan cable in order to remove the HVPS. After removing the fan from its hole in the chassis, simply set the fan down on the workspace.

2. Tip the device so that it rests on its top.

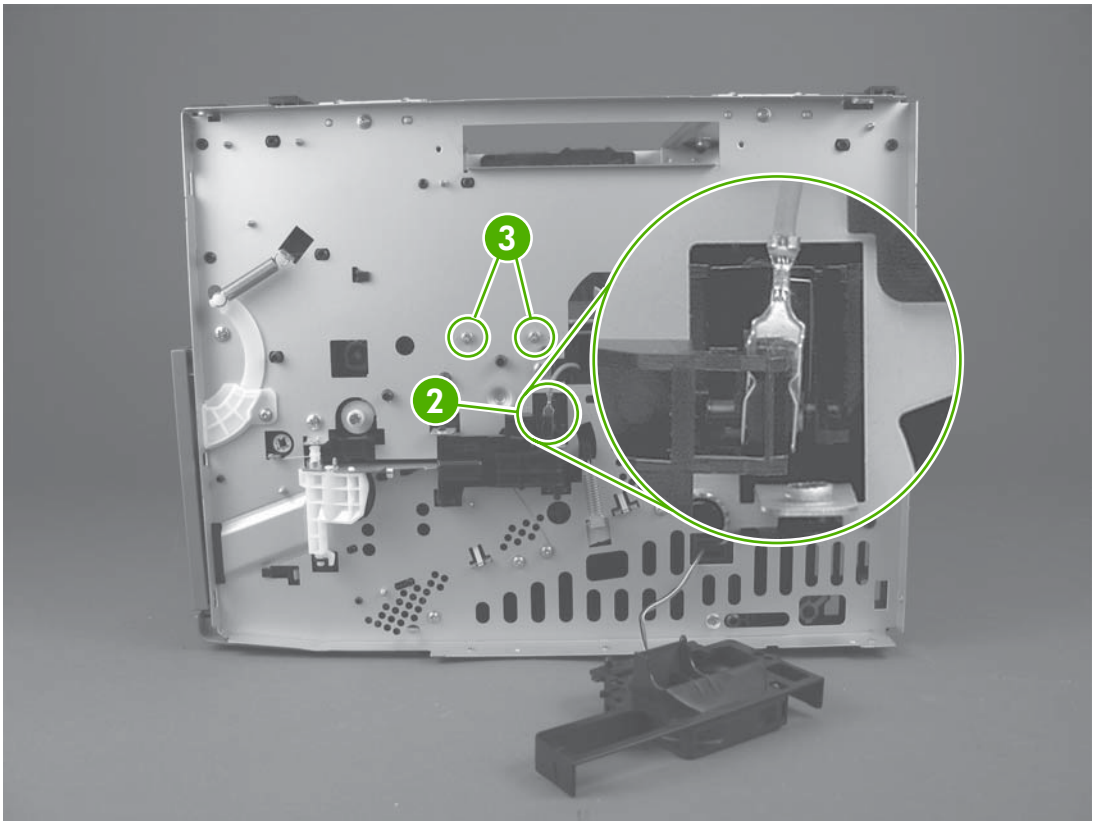
3. Remove one grounding screw from inside the slot (callout 1) for the flat ribbon cable.

**Figure 5-69** Removing the HVPS (1 of 5)



4. At the left side of the device, disconnect one cable (callout 2) and then remove two screws (callout 3).

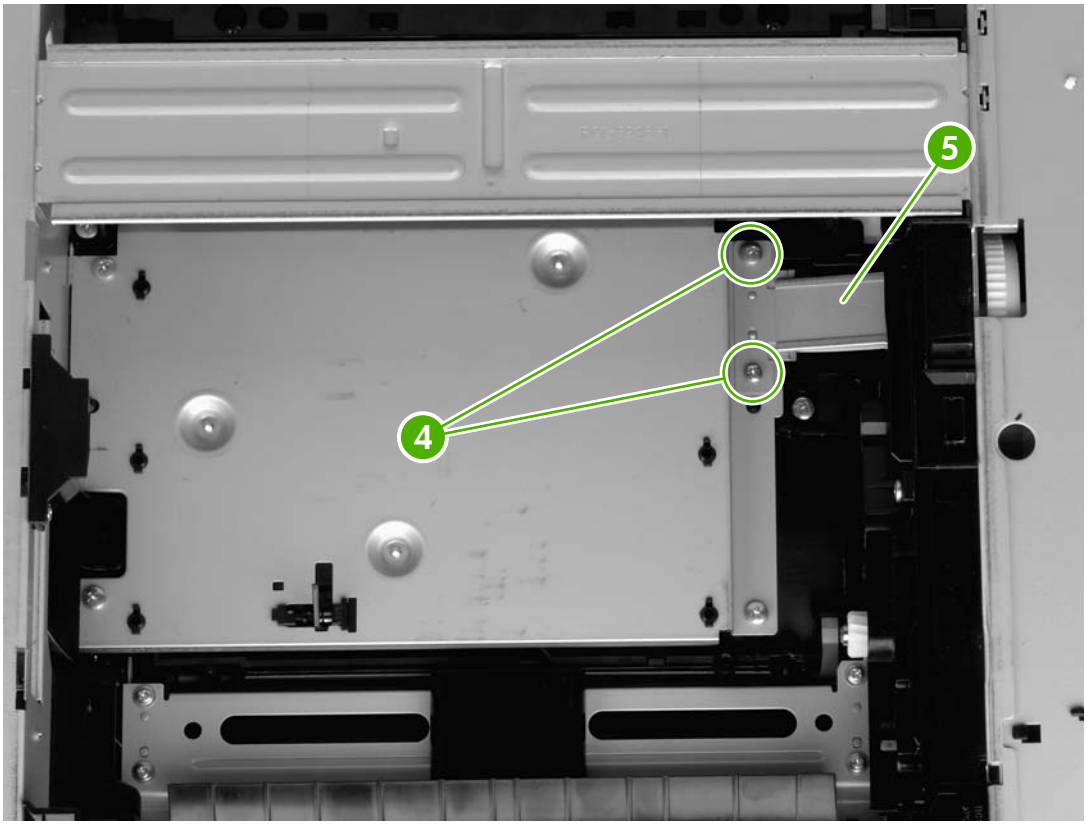
**Figure 5-70** Removing the HVPS (2 of 5)




**Reinstallation tip** Remember how the cable is threaded and connected to the device.

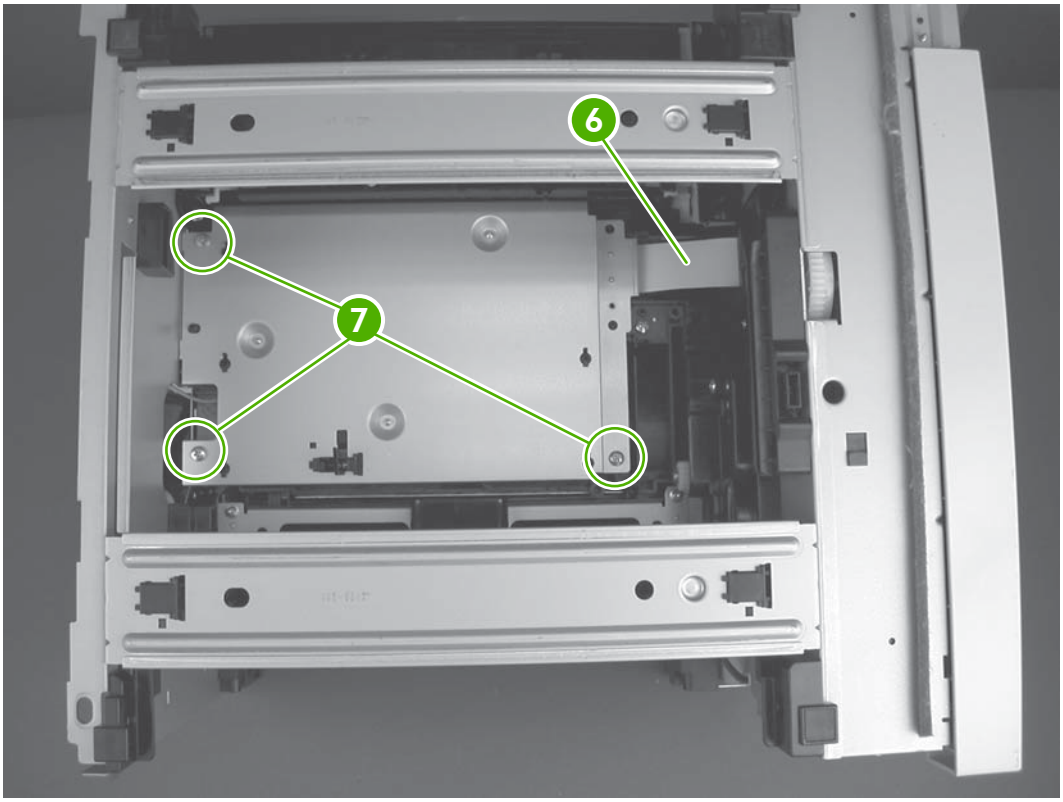
5. Remove two screws (callout 4) from the ribbon-cable protector (callout 5) and then lift the protector out of the device.

**Figure 5-71** Removing the HVPS (3 of 5)



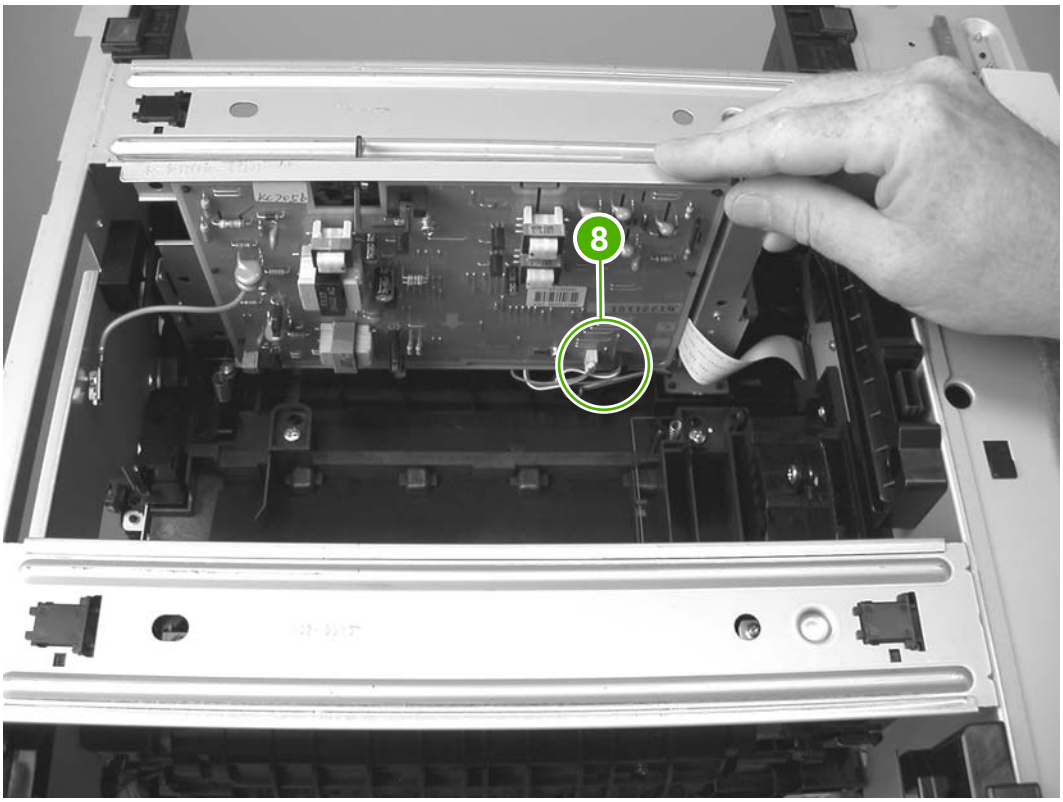
6. Guide the ribbon cable (callout 6) through the hole in the chassis and then remove the remaining three screws (callout 7) from the HVPS pan.

**Figure 5-72** Removing the HVPS (4 of 5)



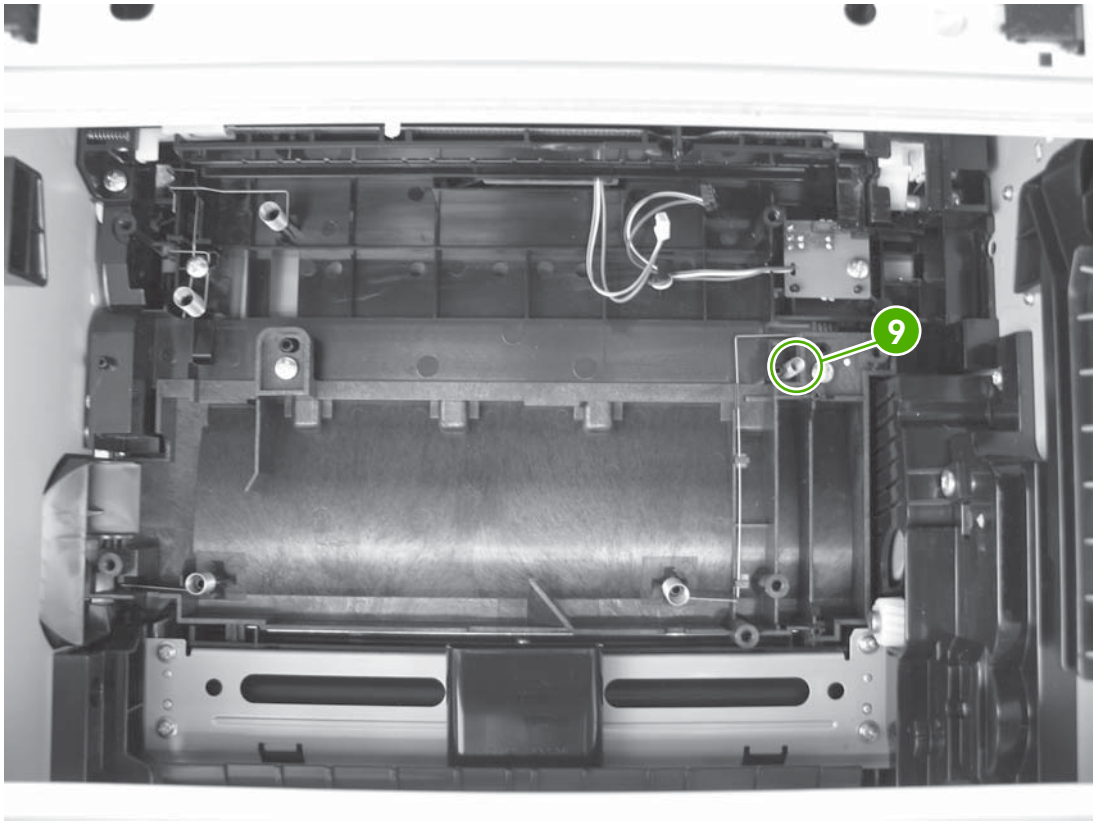
7. Lift the edge of the HVPS pan and then disconnect two cables (callout 8) from the HVPS.

**Figure 5-73** Removing the HVPS (5 of 5)




**NOTE:** The HVPS pan and the HVPS together are a single FRU. You do not have to separate the HVPS from the pan.

**Figure 5-74** Grounding-spring locations




**Reinstallation tip** As you remove the power supply, note the locations of the grounding springs. You might need to reinstall one non-captive spring (callout 9) before reinstalling the power supply.

# Feed-guide assembly

1. Remove the following components:
   - All of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - ECU (see Engine control unit (ECU) on page 148)
   - Left-side riser (see Left-side riser on page 155)
   - Access plate (see Access plate on page 161)
   - Fuser (see Fuser on page 156)
   - Oblique-roller assembly (see Oblique-roller assembly on page 163)
   - Left-side fan (see Left-side fan on page 165)

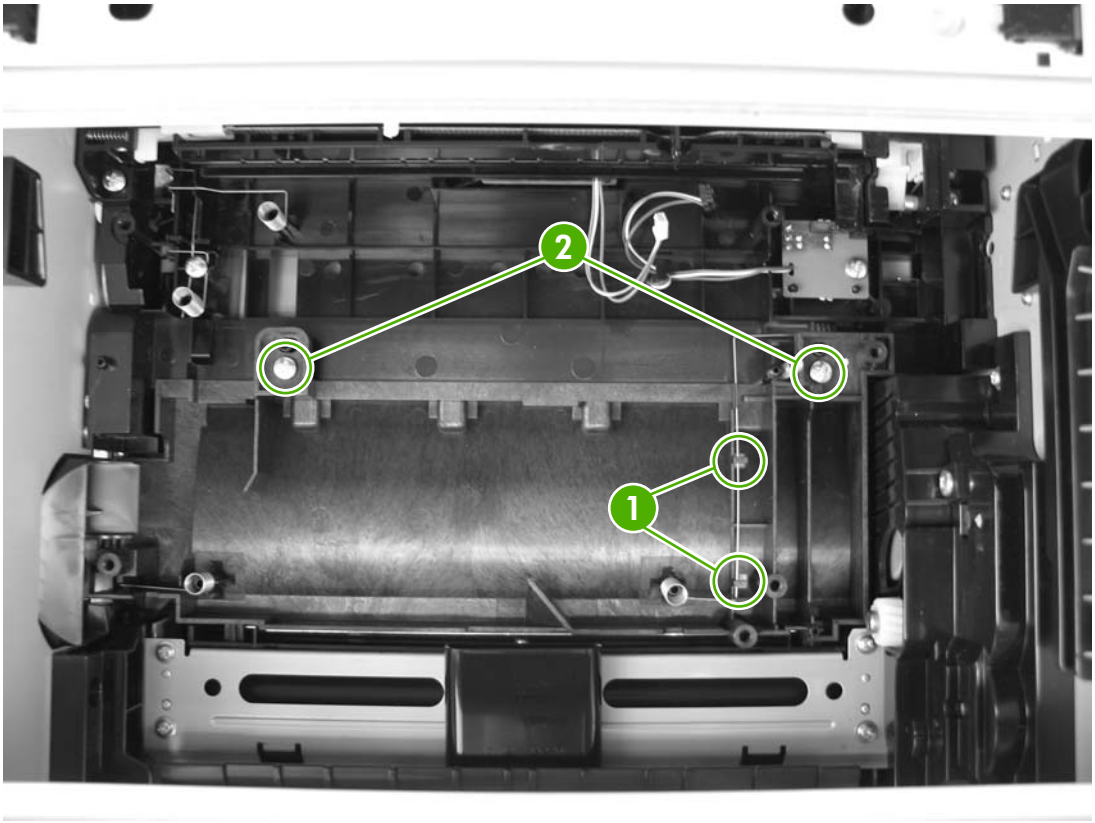
     **TIP:** You do not have to unroute the left-side-fan cable in order to remove the HVPS or the feed-guide assembly. After removing the fan from its hole in the chassis, simply set the fan down on the workspace.

   - High-voltage power supply (see High-voltage power supply (HVPS) on page 166)
2. Lift one non-captive grounding spring (see callout 9 in Figure 5-74 Grounding-spring locations on page 171) out of the device.
3. Loosen the grounding wire from the routing guides (see callout 1 in Figure 5-75 Removing the feed-guide assembly (1 of 2) on page 174).

**CAUTION:** Do not bend or remove the grounding wire.

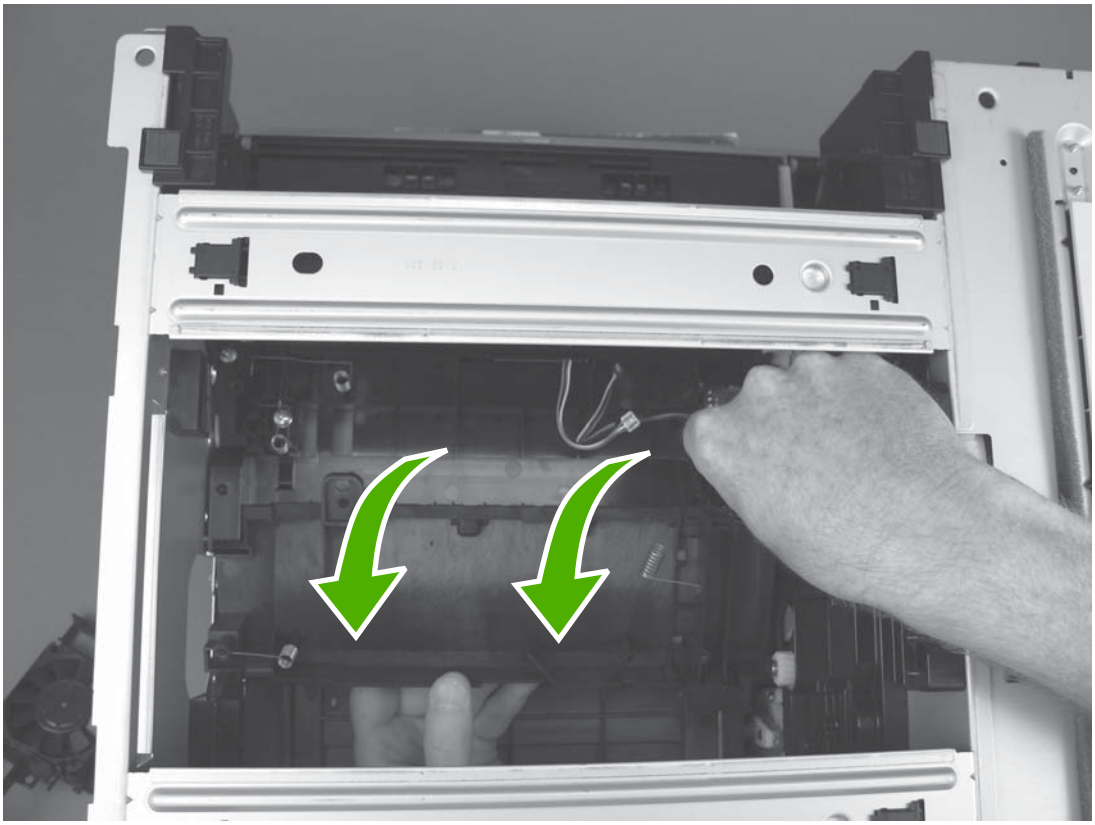
4. Remove two screws (callout 2).

**Figure 5-75** Removing the feed-guide assembly (1 of 2)



5. On the edge of the assembly that is farthest from you, lift the right corner up, twist the assembly counterclockwise, and remove the assembly from the device.

**Figure 5-76** Removing the feed-guide assembly (2 of 2)



**Reinstallation tip** Make sure that the loosened grounding wire is out of the way before reinstalling the feed-guide assembly.

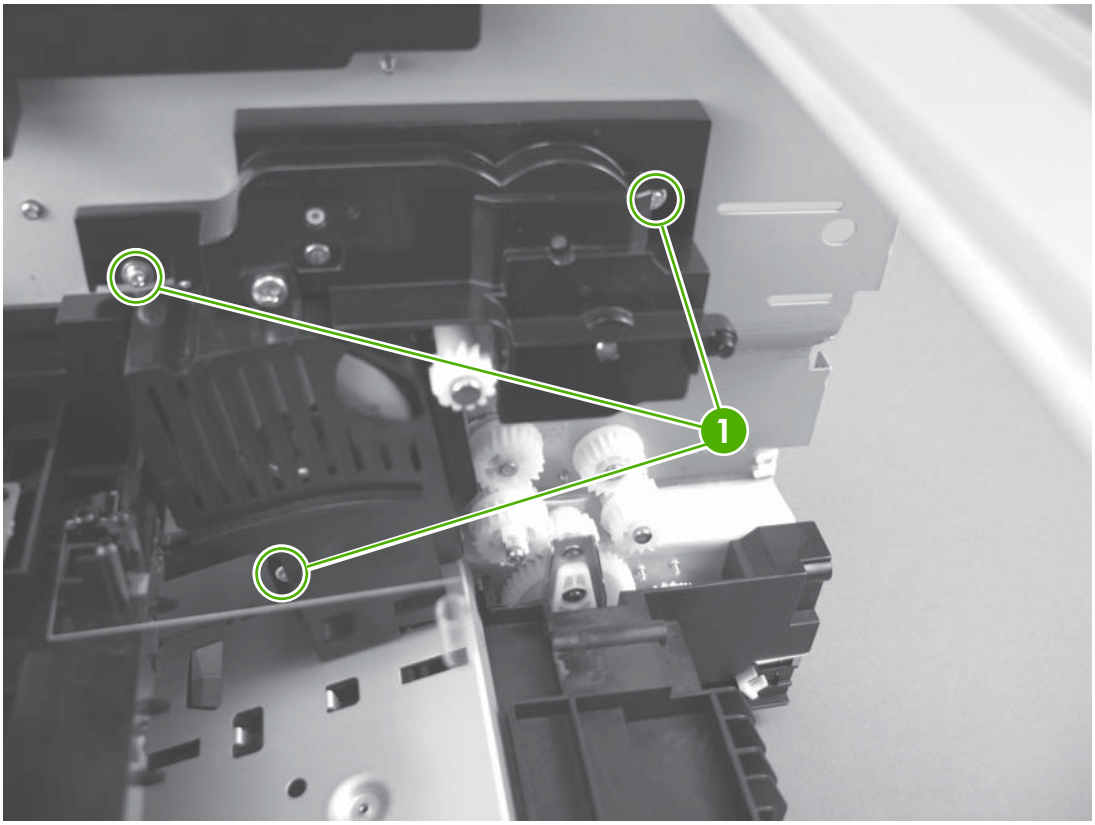
# Main motor

1. Remove the following components:
   - All of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - ECU (see Engine control unit (ECU) on page 148)
   - Left-side riser (see Left-side riser on page 155)
   - Access plate (see Access plate on page 161)
   - Fuser (see Fuser on page 156)
   - Oblique-roller assembly (see Oblique-roller assembly on page 163)
   - Left-side fan (see Left-side fan on page 165)

     **TIP:** You do not have to unroute the left-side-fan cable in order to remove the HVPS, the feed-guide assembly, or the main motor. After removing the fan from its hole in the chassis, simply set the fan down on the workspace.
   - High-voltage power supply (see High-voltage power supply (HVPS) on page 166)
   - Feed-guide assembly (see Feed-guide assembly on page 173)

2. Remove three screws (callout 1) from the main motor cover and then lift the cover out of the device.

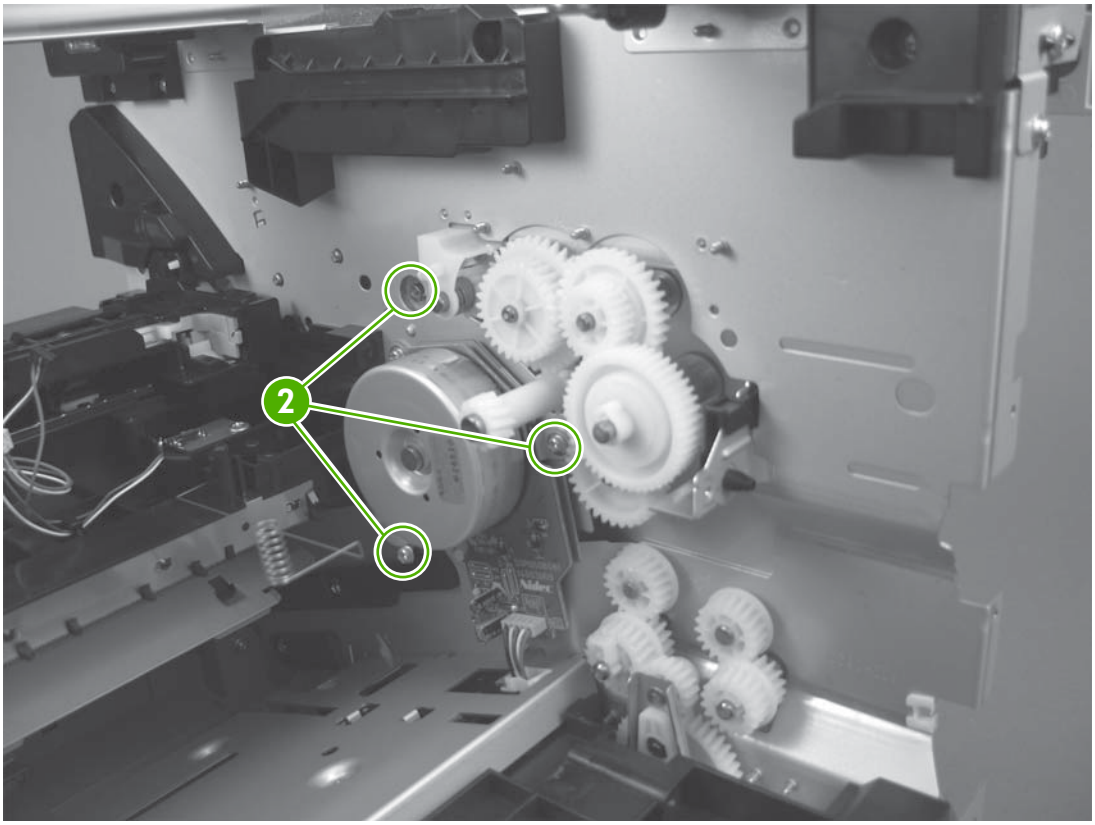
**Figure 5-77** Removing the main motor (1 of 2)




⚠ **WARNING!** The teeth on the static-eliminator sheet are *sharp*. Be careful not to cut yourself on the static-eliminator teeth when removing screws in the area of the main motor.

3. Remove three screws (callout 2), unroute the main-motor cable, and then lift the motor out of the device.

**Figure 5-78** Removing the main motor (2 of 2)




**NOTE:** Do not attempt to disconnect the cable at the main motor. The cable is permanently connected to the main motor.

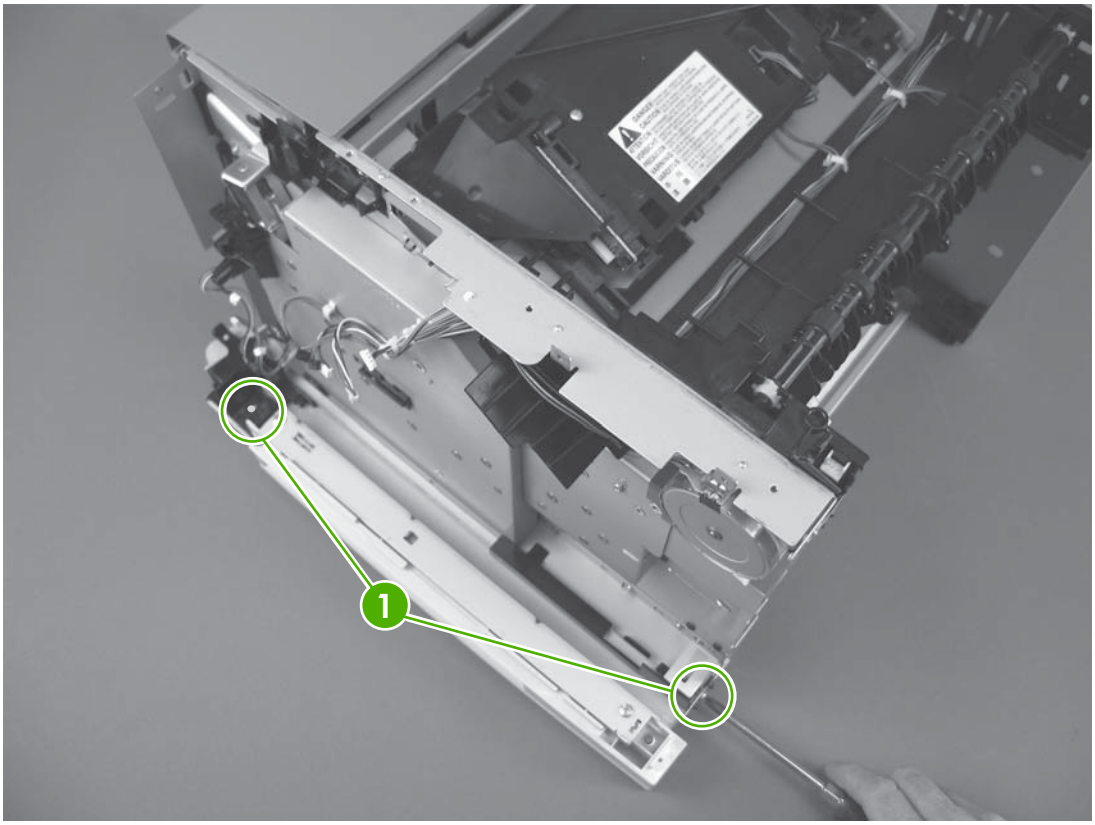
# Gear assembly

1. Remove the following components:
   - All of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - ECU (see Engine control unit (ECU) on page 148)
   - Left-side riser (see Left-side riser on page 155)
   - Access plate (see Access plate on page 161)
   - Fuser (see Fuser on page 156)
   - Oblique-roller assembly (see Oblique-roller assembly on page 163).
   - Left-side fan (see Left-side fan on page 165)

     **TIP:** You do not have to unroute the left-side-fan cable in order to remove the HVPS, the feed-guide assembly, or the gear assembly. After removing the fan from its hole in the chassis, simply set the fan down on the workspace.
   - High-voltage power supply (see High-voltage power supply (HVPS) on page 166)
   - Feed-guide assembly (see Feed-guide assembly on page 173)

2. Remove two screws (callout 1) from the switch-link assembly, slide the assembly toward the front of the device, and then lift it out of the device.

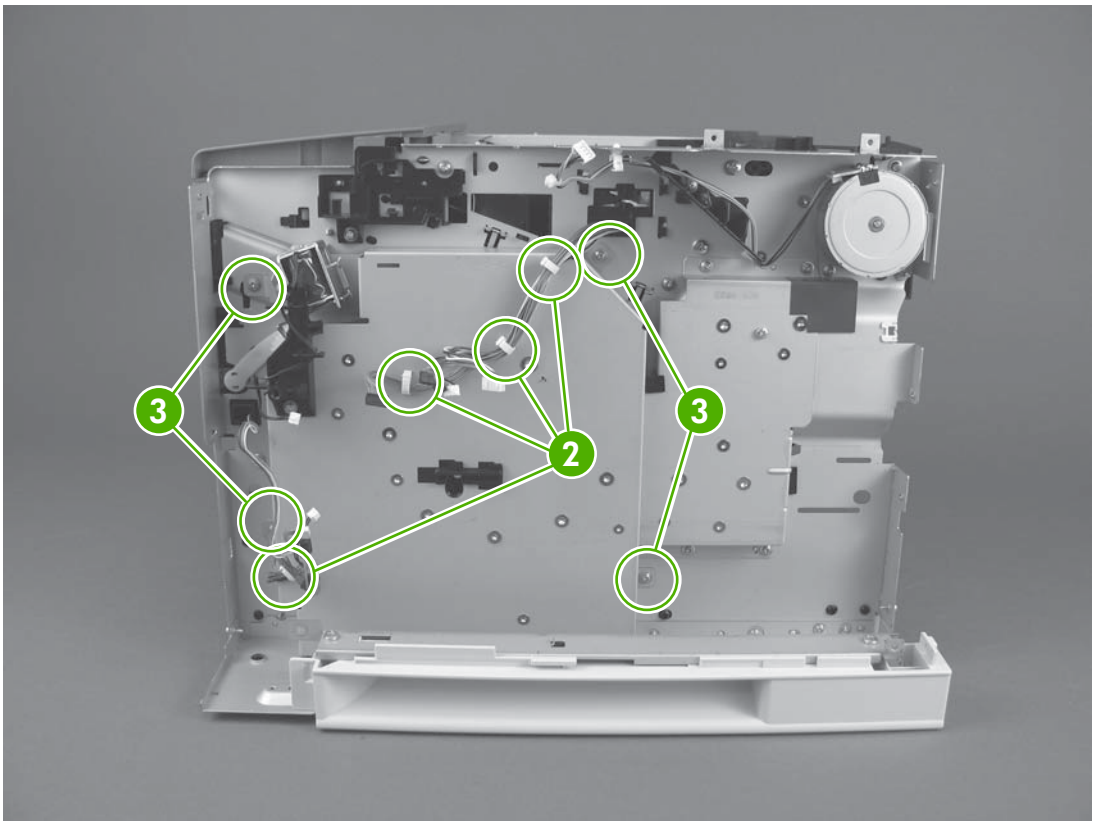
**Figure 5-79** Removing the gear assembly (1 of 2)



3. Remove cables from four cable guides (callout 2) and then remove four screws (callout 3) from the gear-assembly plate.

**NOTE:** Make sure that you duplicate the cable routing when you reinstall the assembly.

**Figure 5-80** Removing the gear assembly (2 of 2)




4. Pull the gear assembly straight away from the device.

**NOTE:** The spring (callout 4 in Figure 5-81 Reinstalling the gear assembly on page 182) is not attached to the gear-assembly plate or to the large gear. As a result, the spring might fall out of the device when you remove the gear assembly.

# Reinstallation notes for the gear assembly

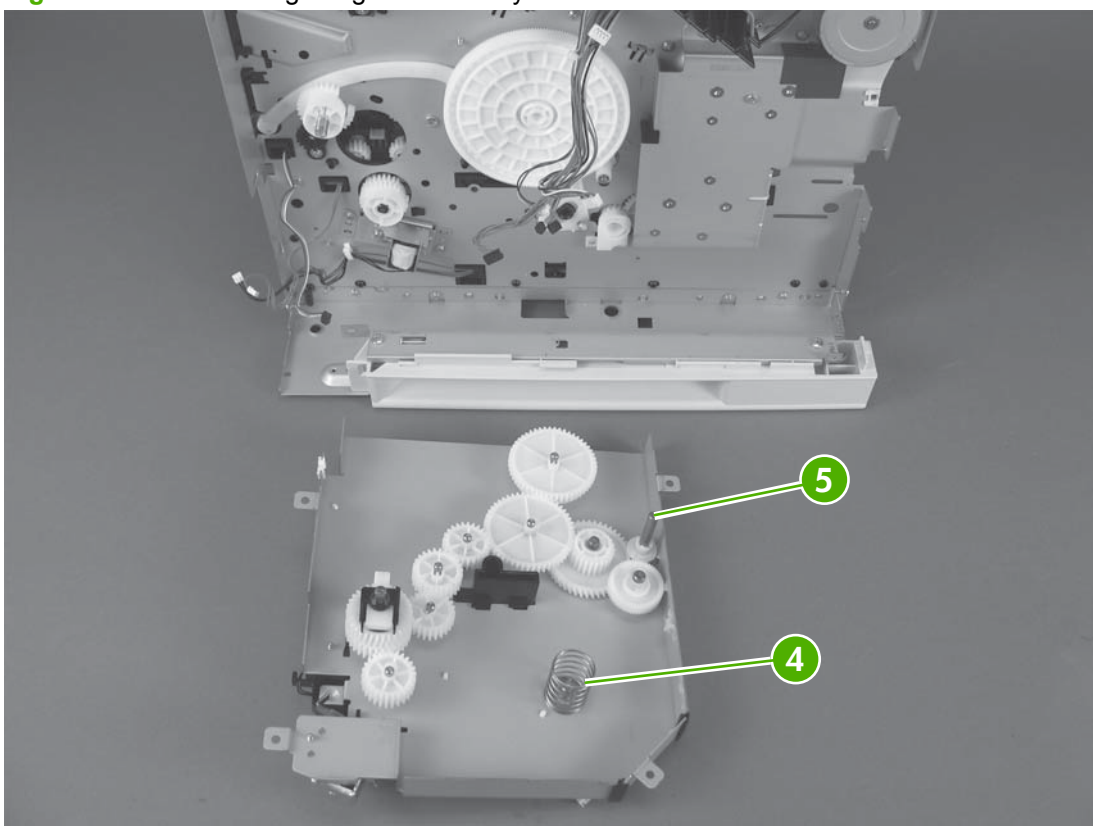
**Reinstallation tip** Close the cartridge door and press the large gear against the device chassis before you start to reinstall the gear assembly.

**Reinstallation tip** The spring (callout 4) has a locating pin that must be inserted into the small hole in the gear-assembly plate before reinstallation.

**Reinstallation tip** Use the rod (callout 5) on the gear-assembly plate as a locator to find the correct position for the gear assembly. Insert the rod into the hole in the lower gear on the device chassis.

**Reinstallation tip** Be careful not to catch any cables behind the gear-assembly plate when reinstalling the screws.

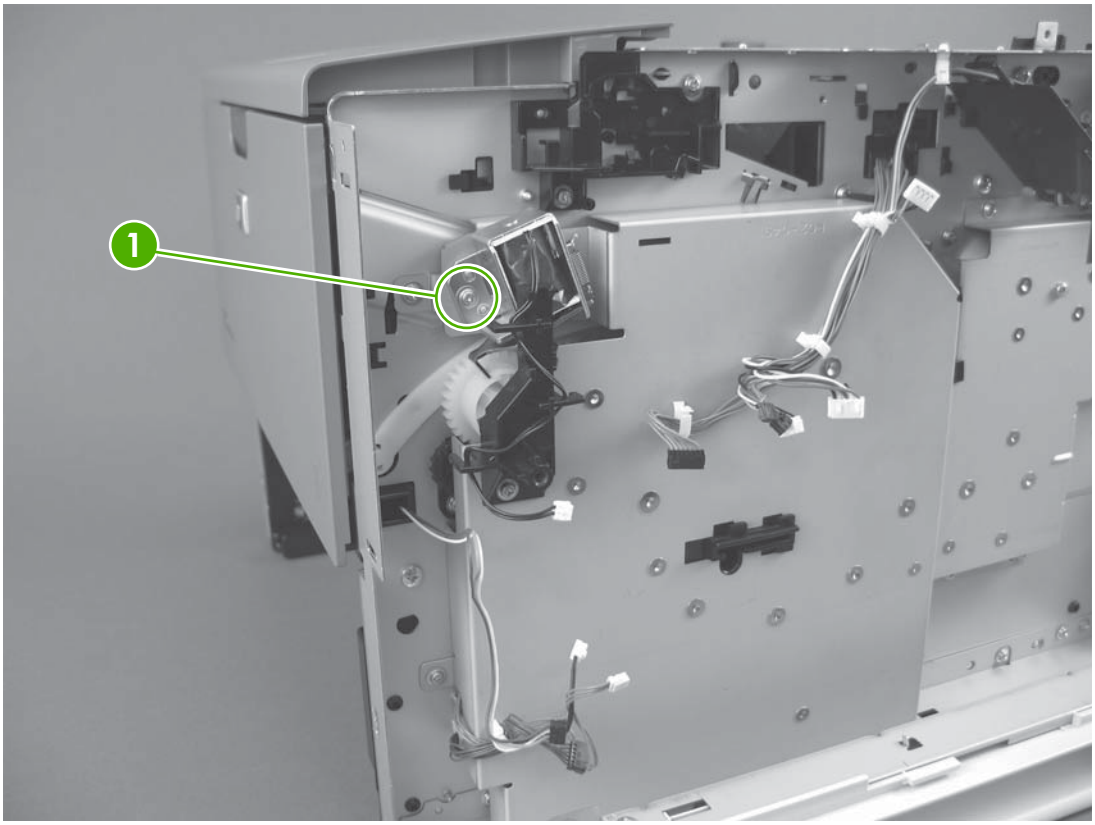
**Figure 5-81** Reinstalling the gear assembly



# Tray 1 solenoid

1. Remove the following components:
   - All covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - Right side fan (see Right-side fan on page 145)
   - ECU (see Engine control unit (ECU) on page 148)
2. Remove one screw (callout 1).

**Figure 5-82** Removing the tray 1 solenoid

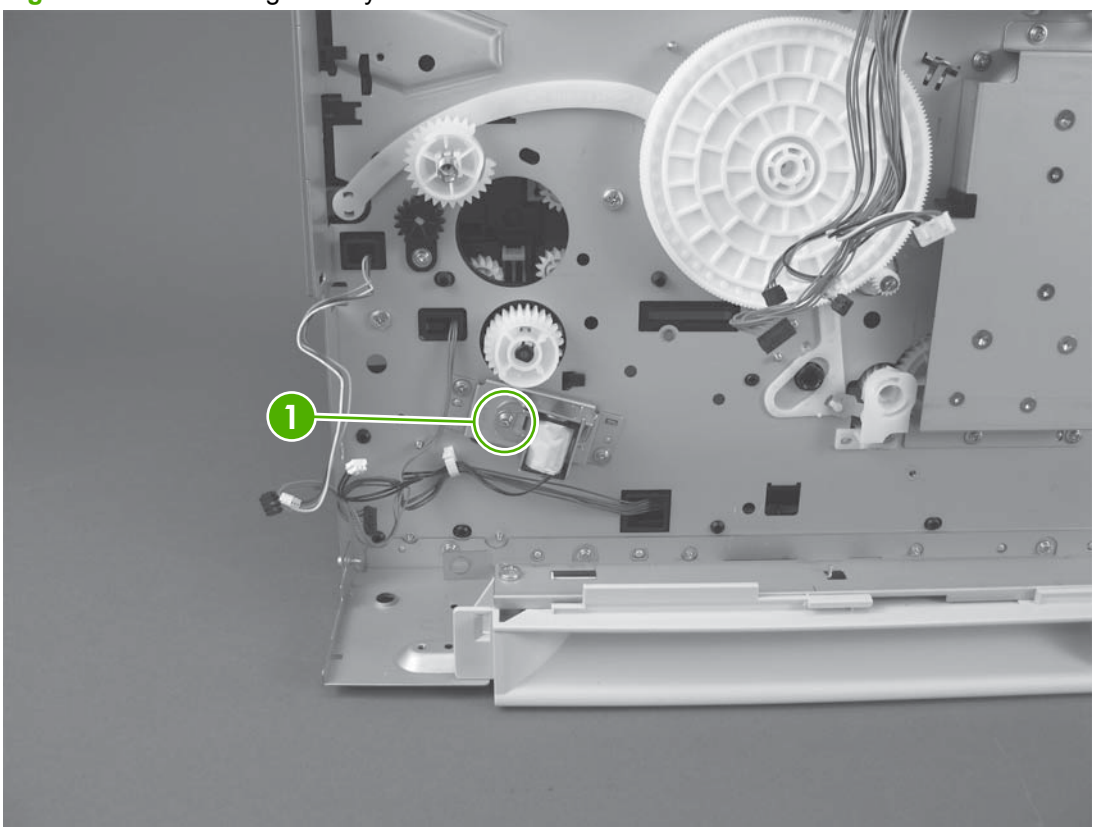



3. Lift the solenoid off of the device chassis.

# Tray 2 solenoid

1. Remove the following components:
   - All covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Fax accessory (see Fax accessory on page 130)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - Right-side fan (see Right-side fan on page 145)
   - ECU (see Engine control unit (ECU) on page 148)
   - High-voltage power supply (see High-voltage power supply (HVPS) on page 166)
   - Gear assembly (see Gear assembly on page 179)
2. Remove one screw (callout 1).

**Figure 5-83** Removing the tray 2 solenoid




3. Lift the solenoid off of the device chassis.

# Pickup assembly

1. Remove the following components:

   - All of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110)
   - Disk drive (see Disk drive on page 132)
   - Formatter (see Formatter on page 135)
   - Stapler (see Stapler on page 136) and stapler power-supply (see Stapler power-supply on page 140)
   - ECU (see Engine control unit (ECU) on page 148)
   - Left-side riser (see Left-side riser on page 155)
   - Access plate (see Access plate on page 161)
   - Fuser (see Fuser on page 156)
   - Oblique-roller assembly (see Oblique-roller assembly on page 163).
   - Left-side fan (see Left-side fan on page 165)

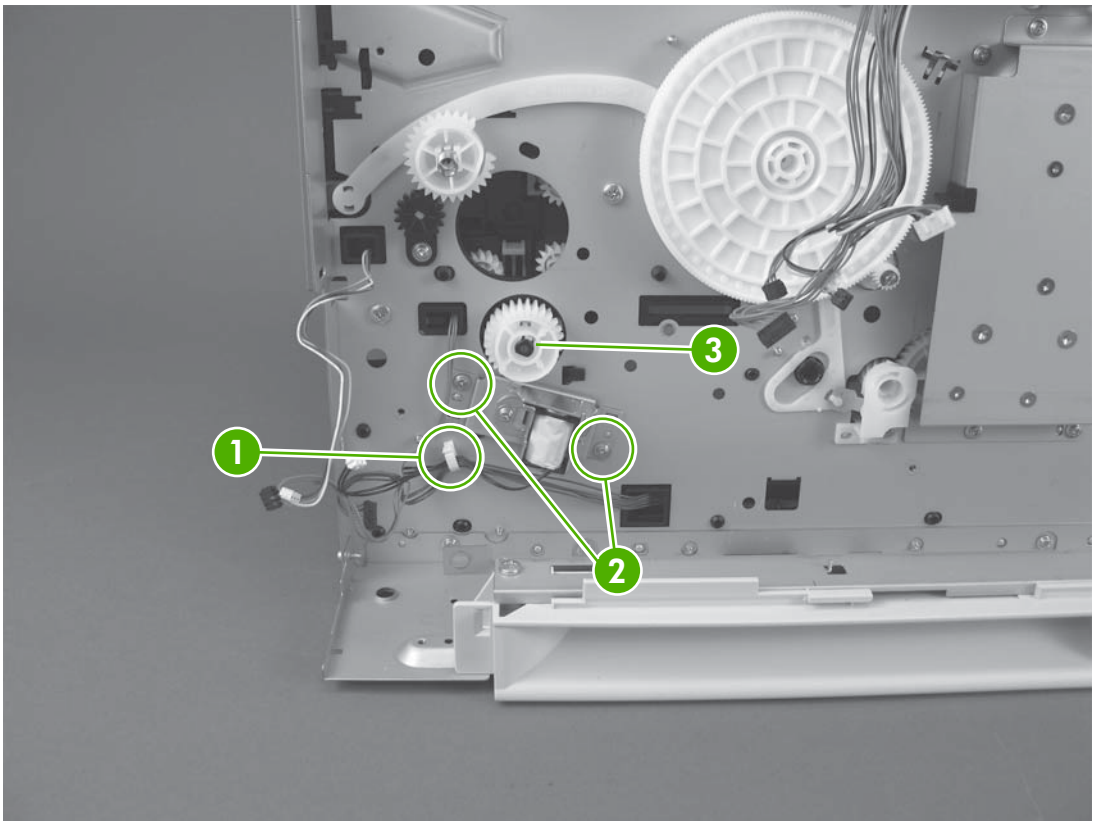
     **TIP:** You do not have to unroute the left-side-fan cable in order to remove the HVPS, the feed-guide assembly, the gear assembly, or the pickup assembly. After removing the fan from its hole in the chassis, simply set the fan down on the workspace.

   - High-voltage power supply (see High-voltage power supply (HVPS) on page 166)
   - Feed-guide assembly (see Feed-guide assembly on page 173)
   - Gear assembly (see Gear assembly on page 179)

2. Remove the cables from the cable guide (callout 1) and then remove two screws (callout 2) from the tray 2 solenoid plate. Press the tab on the pickup shaft gear (callout 3) and then slide the gear off of the shaft.

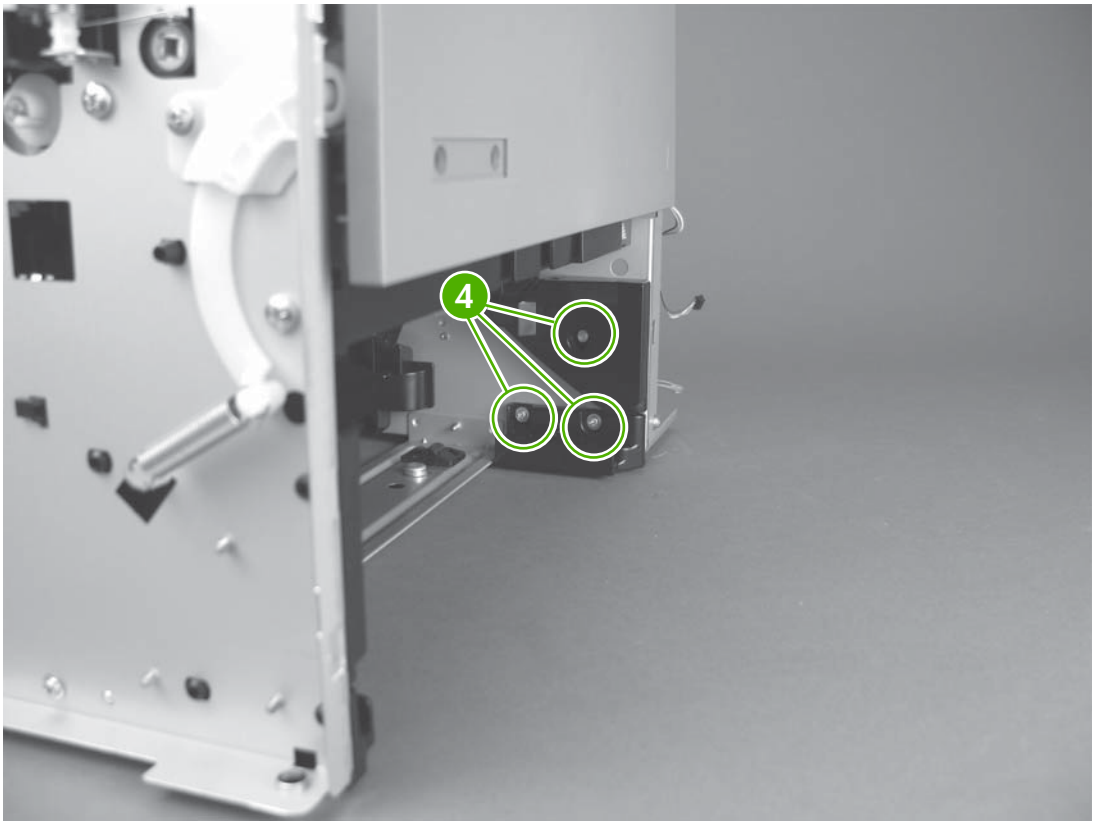
**NOTE:** Keep the parts of the pickup-shaft gear together to make sure that the small spring inside remains with the gear.

**Figure 5-84** Removing the pickup assembly (1 of 4)



3. Remove three screws (callout 4) from two tray guides at the right side of the device and then lift the guides out of the device. Repeat the procedure to remove the tray guides at the left side of the device.

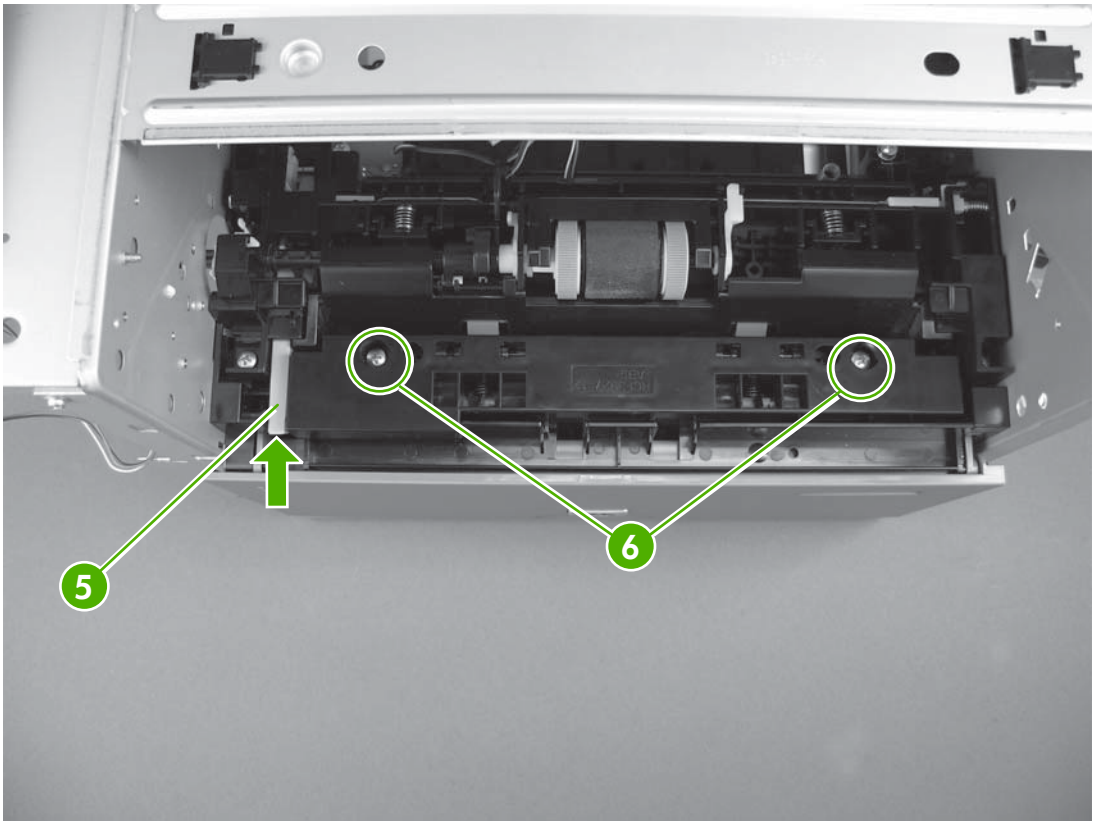
**Figure 5-85** Removing the pickup assembly (2 of 4)




4. Tip the device so that it rests on its top.

5. Press in the green tab (callout 5), remove two screws (callout 6) from the roller-stay assembly, and then lift the assembly out of the device.

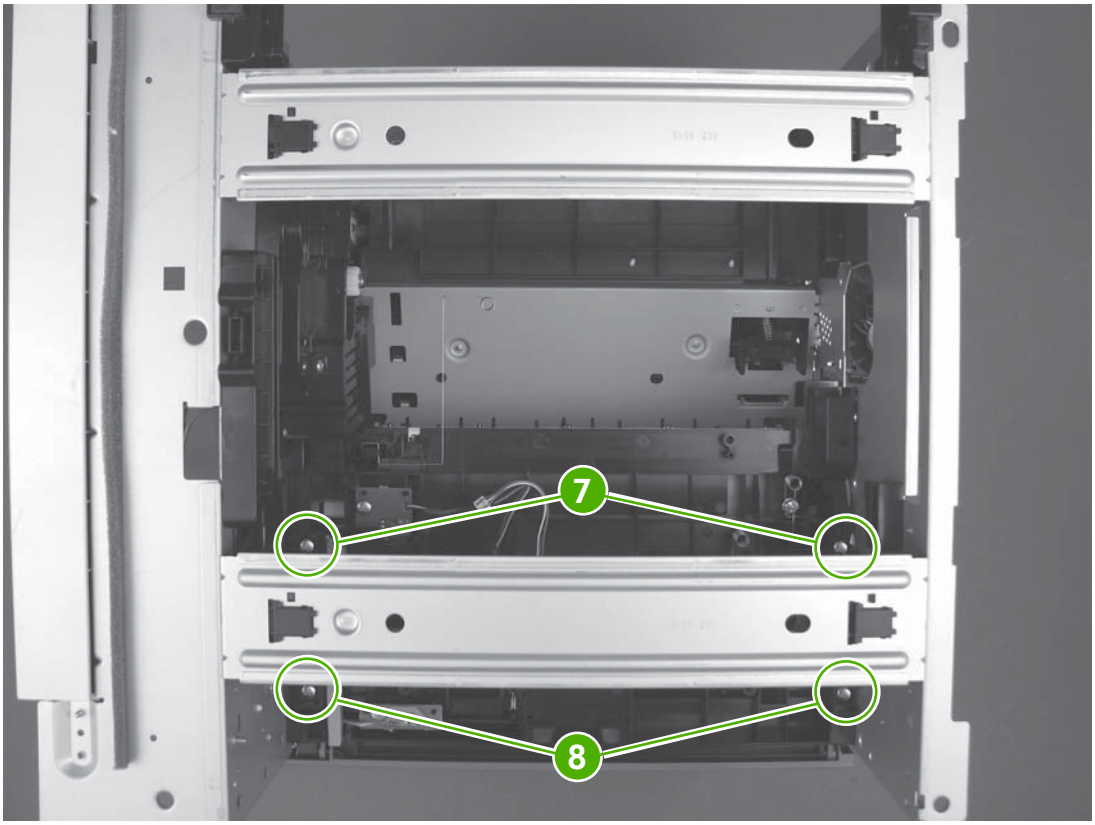
**Figure 5-86** Removing the pickup assembly (3 of 4)




**NOTE:** After removing the roller-stay assembly, the media-present sensor for tray 1 is exposed. To remove the sensor, remove one screw, unthread the sensor cable, and lift the sensor out of the device.

6. Use a short screwdriver to remove two screws (callout 7) and then remove the remaining two screws (callout 8) from the pickup assembly.

**Figure 5-87** Removing the pickup assembly (4 of 4)




7. Lift the assembly out of the device starting at the opposite end from the gear-end of the assembly.

**NOTE:** After removing the pickup assembly, the top-of-page sensor is easily accessible. To remove the top-of-page sensor, use a short screwdriver to remove two screws from the sensor cover, remove one screw from the sensor, unthread the sensor cable, and then lift the sensor out of the device.

# Tray 1 media-present sensor and top-of-page sensor

The tray 1 media-present sensor is exposed when the roller-stay assembly is removed in step 5 of the pickup assembly removal (see Pickup assembly on page 185). To remove the sensor, remove one screw (callout 1), unthread the sensor cable, and then lift the sensor out of the device.

To remove the top-of-page sensor, remove the pickup assembly (see Pickup assembly on page 185 and then remove two screws (callout 2) from the sensor cover. Lift the sensor cover out of the device to expose the top-of-page sensor, and then remove one screw from the sensor.

**Figure 5-88** Removing the tray 1 media-present sensor and the top-of-page sensor

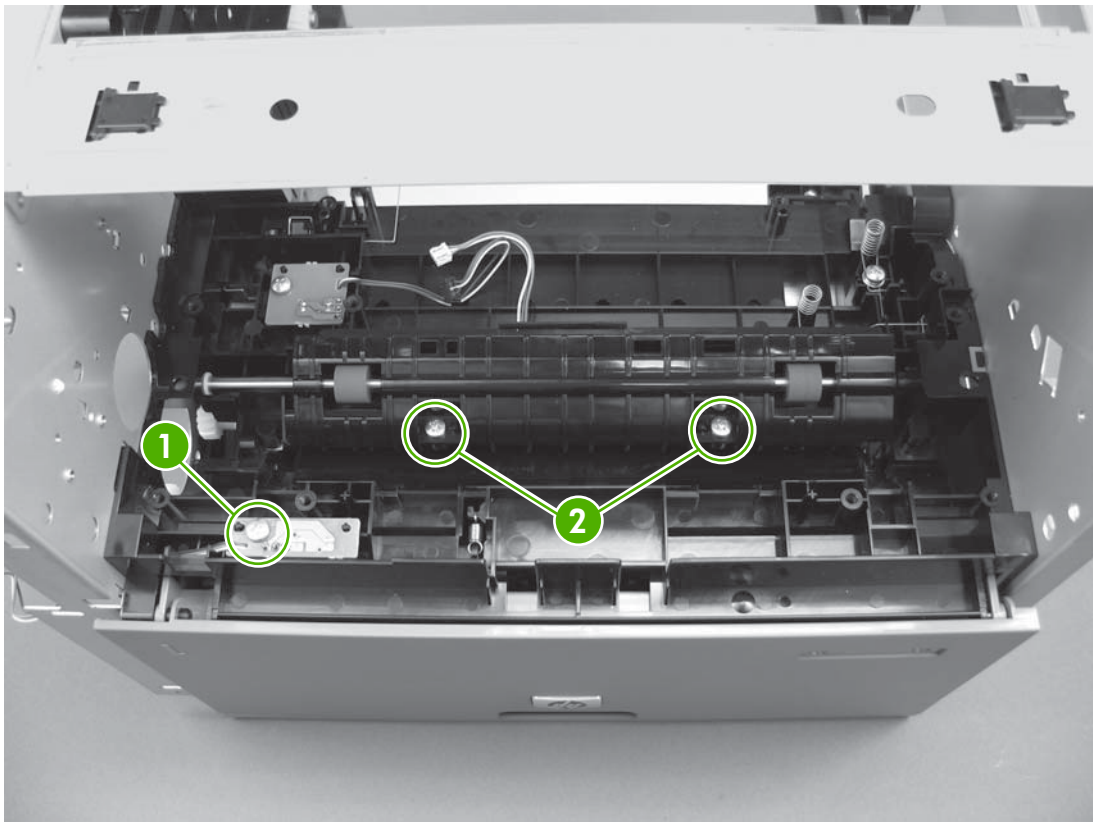
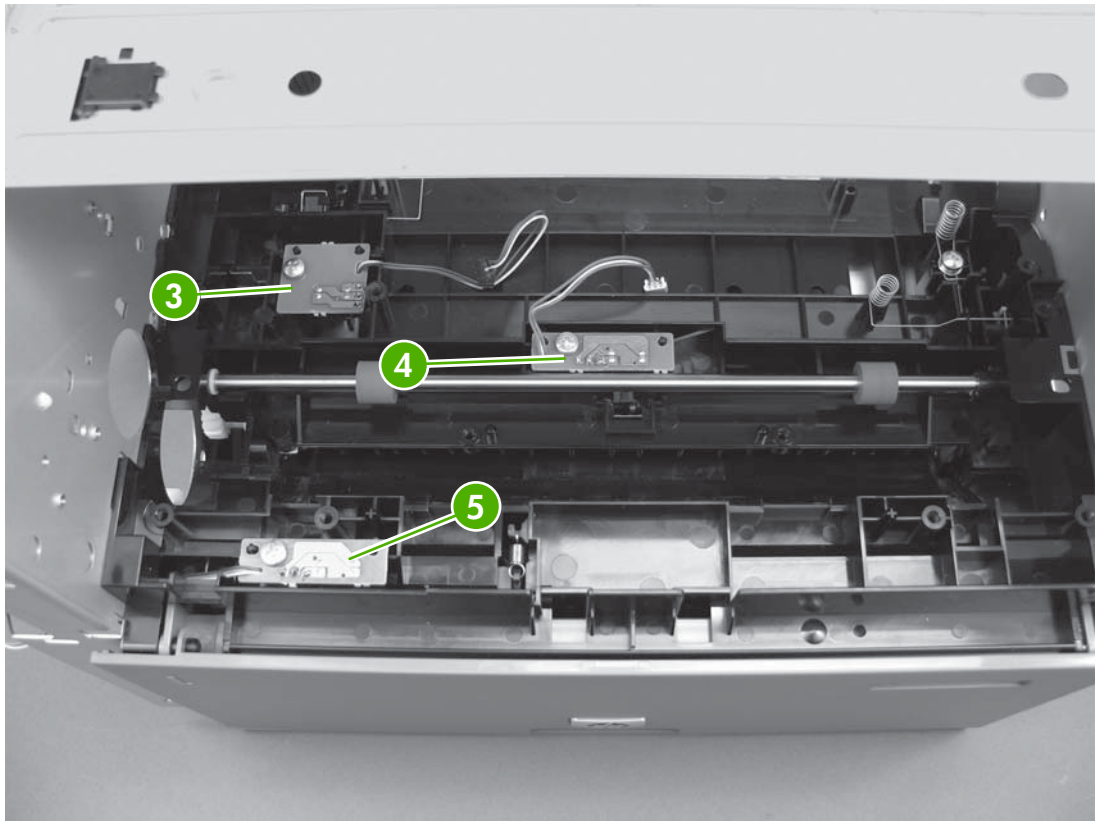



**Figure 5-89** Media-width, top-of-page, and tray 1 media-present sensors




**NOTE:** Figure 5-89 Media-width, top-of-page, and tray 1 media-present sensors on page 190 shows three sensors:

Media-width sensor (callout 3), which can be removed after removing the high-voltage power-supply (see High-voltage power supply (HVPS) on page 166)

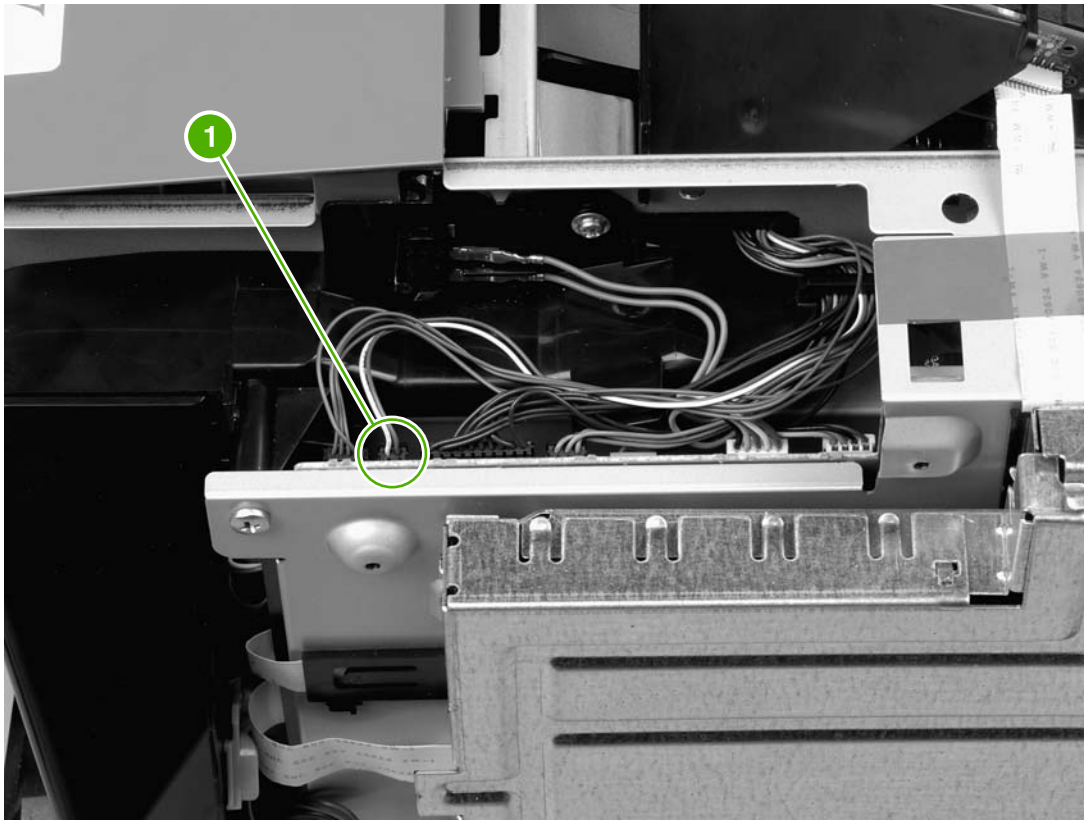
Top-of-page sensor (callout 4), which can be removed according to instructions in this section

Tray 1 media-present sensor (callout 5), which can be removed according to instructions in this section

# E-label reader (memory tag)

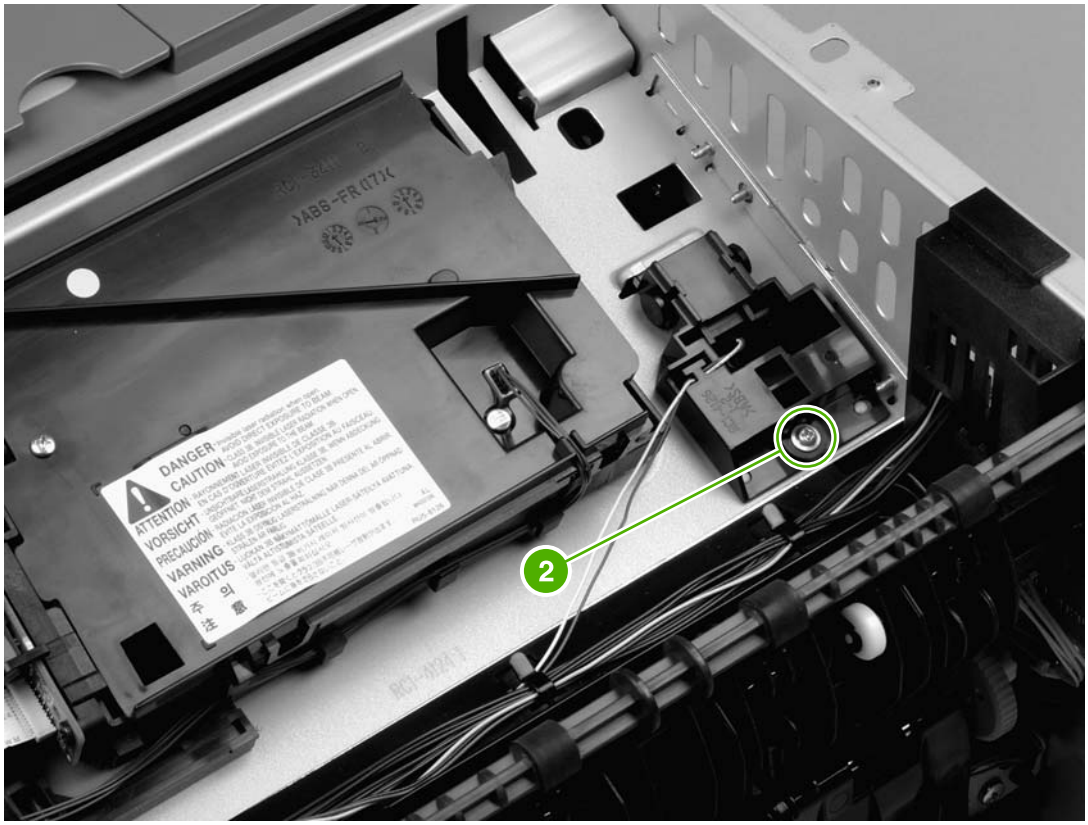
1. Remove all of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110).
2. Disconnect one cable (callout 1), and then thread the cable through the hole in the device chassis.

**Figure 5-90** Removing the e-label reader (1 of 2)



3. Remove one screw (callout 2).

**Figure 5-91** Removing the e-label reader (2 of 2)




4. Lift the e-label reader out of the device.

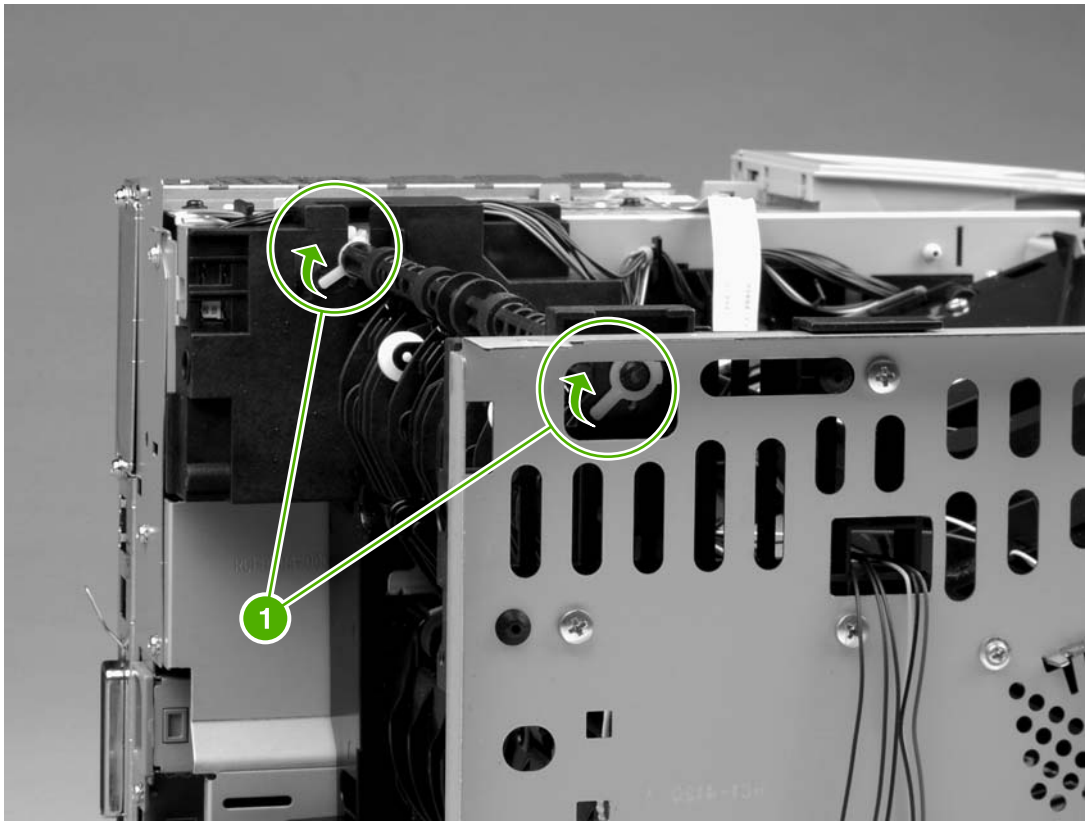
**Reinstallation tip** Insert the tab at the front of the reader into the metal slot first.

# Face-down-roller shaft

1. Remove all of the covers (see Covers on page 114) and the ADF/scanner assembly (see Scanner assembly on page 110).
2. Rotate the bushings (callout 1) at both ends of the face-down-roller shaft .

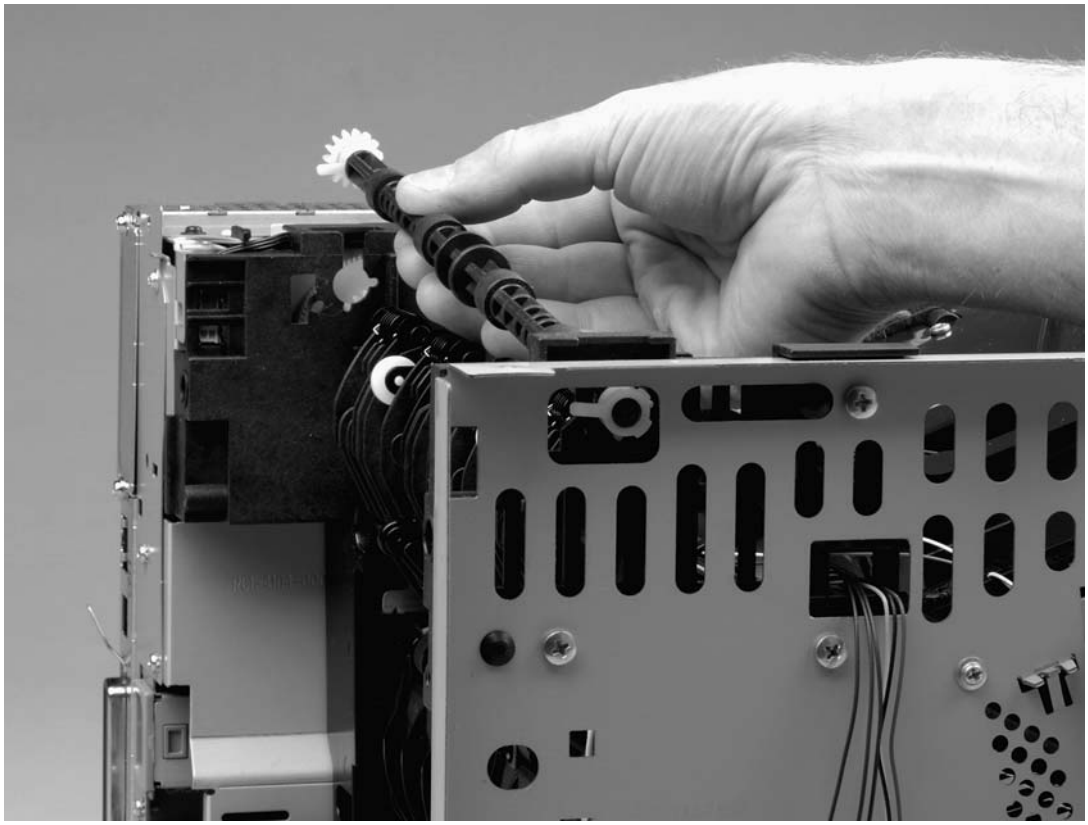
**NOTE:** The bushing on the left side of the device rotates to a horizontal position. The bushing on the right side rotates approximately 45°.

**Figure 5-92** Removing the face-down-roller shaft (1 of 2)



3. Lift the end at the right side of the device, and then slide the shaft toward the right side to clear the hole on the left side of the device chassis.

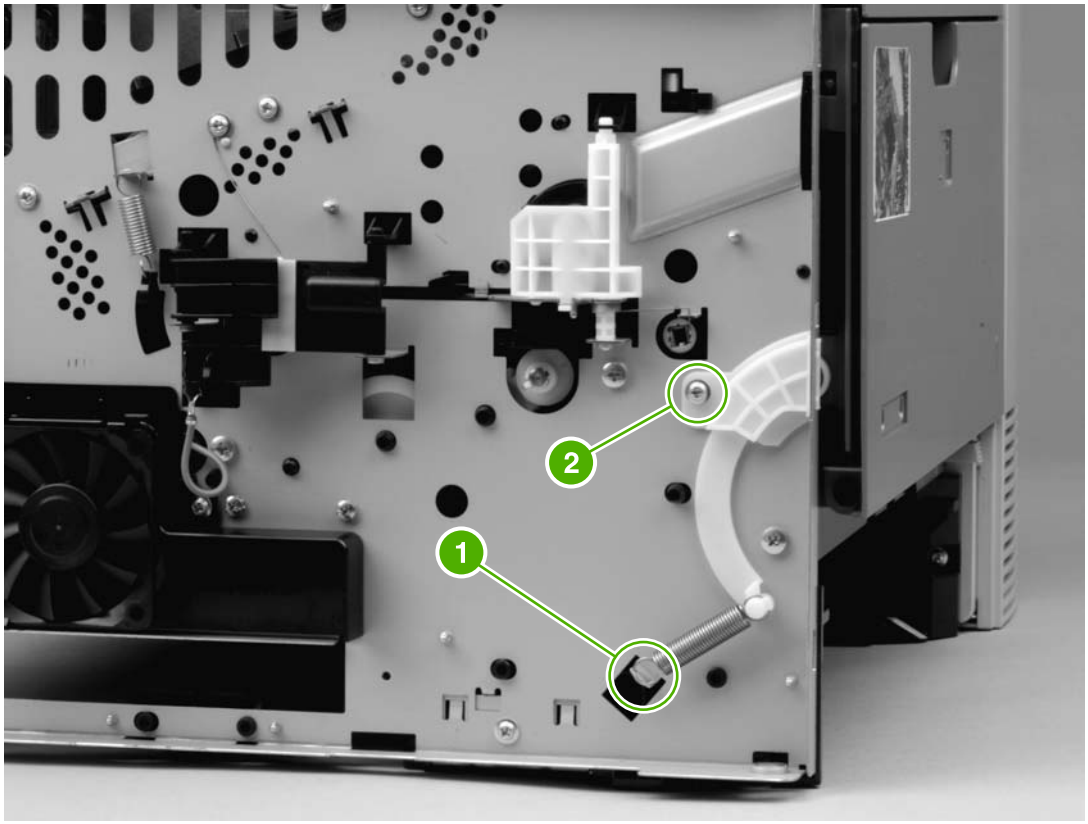
**Figure 5-93** Removing the face-down-roller shaft (2 of 2)



# Cartridge door

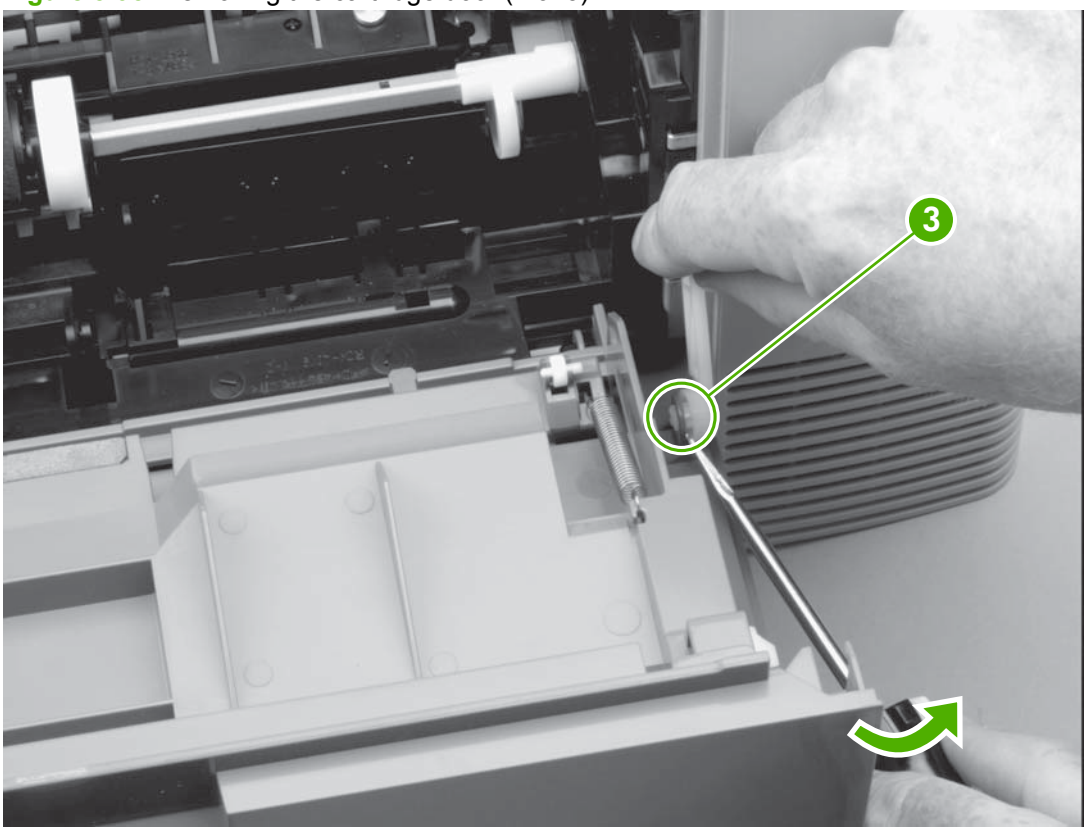
1. Remove the left-side cover (see Left-side cover on page 117).
2. With the cartridge door closed, unhook the spring (callout 1) at the device chassis, and then remove one screw (callout 2).

**Figure 5-94** Removing the cartridge door (1 of 3)



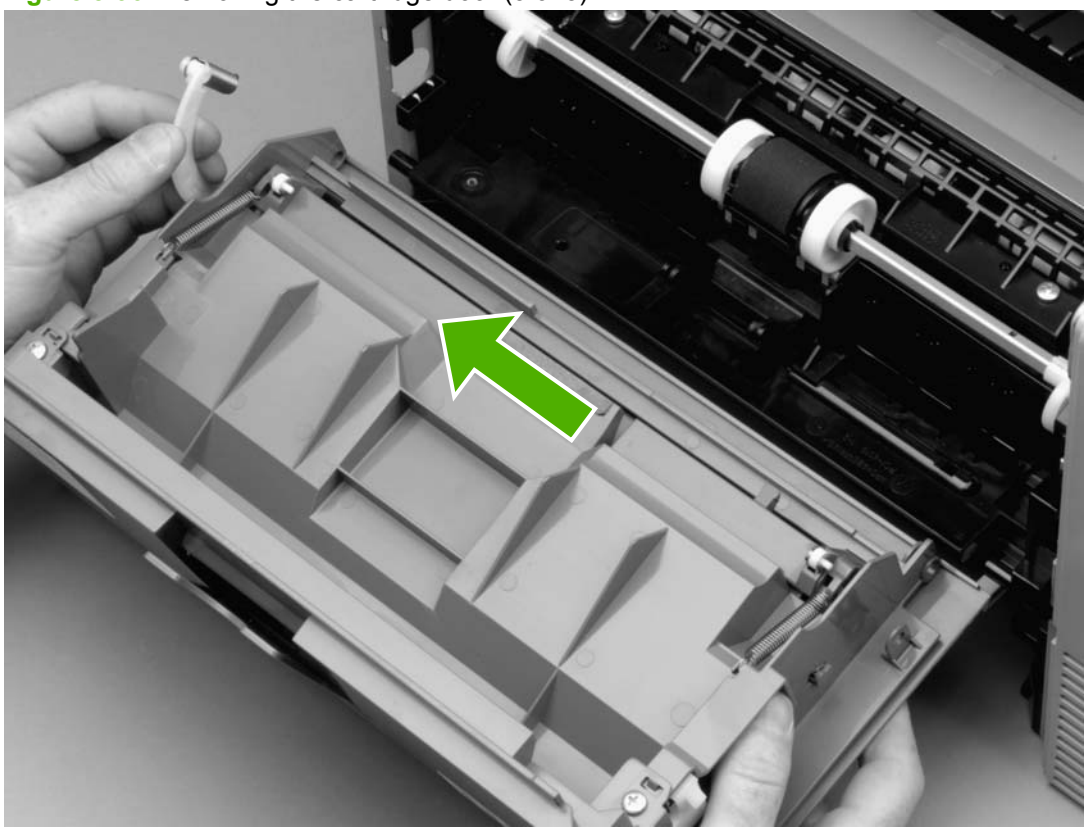
3. Open the cartridge door, and then use a flatblade screwdriver to release the cartridge-door arm (callout 3) at the right side of the cartridge door.

**Figure 5-95** Removing the cartridge door (2 of 3)



4. Slide the cartridge door to the left, off of the hinges, and then pull the door away from the device.

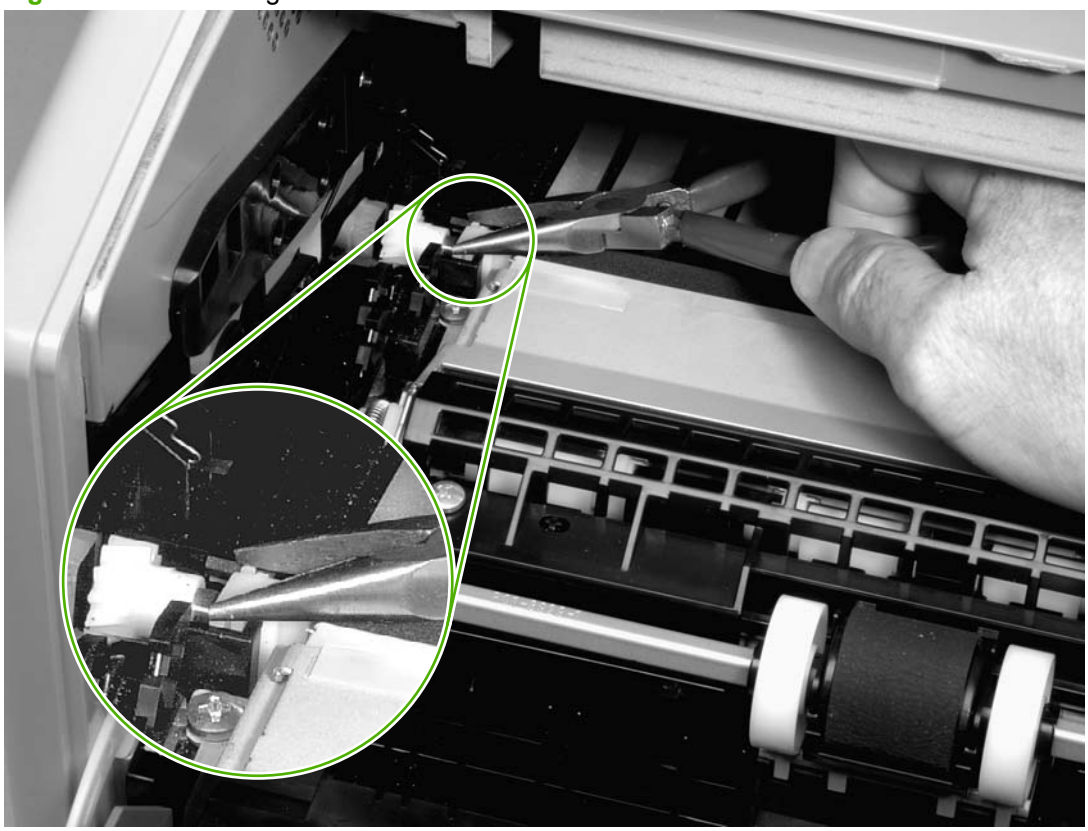
**Figure 5-96** Removing the cartridge door (3 of 3)



# Transfer roller

1. Open the cartridge door.
2. Release the left end of the transfer roller by using needle-nose pliers or a small flatblade screwdriver to pinch two tabs at the left end of the transfer roller.

**Figure 5-97** Removing the transfer roller



3. Use the needle-nose pliers or flatblade screwdriver in the same manner to release the other end.
4. Lift the transfer roller out of the device.

**NOTE:** The left end of the transfer roller has a spring attached. At the right end of the roller, the spring is attached to the device rather than to the roller. As a result, the spring at the right end remains in the device. Also, the gear assembly at the right end of the roller is not captive on the roller.

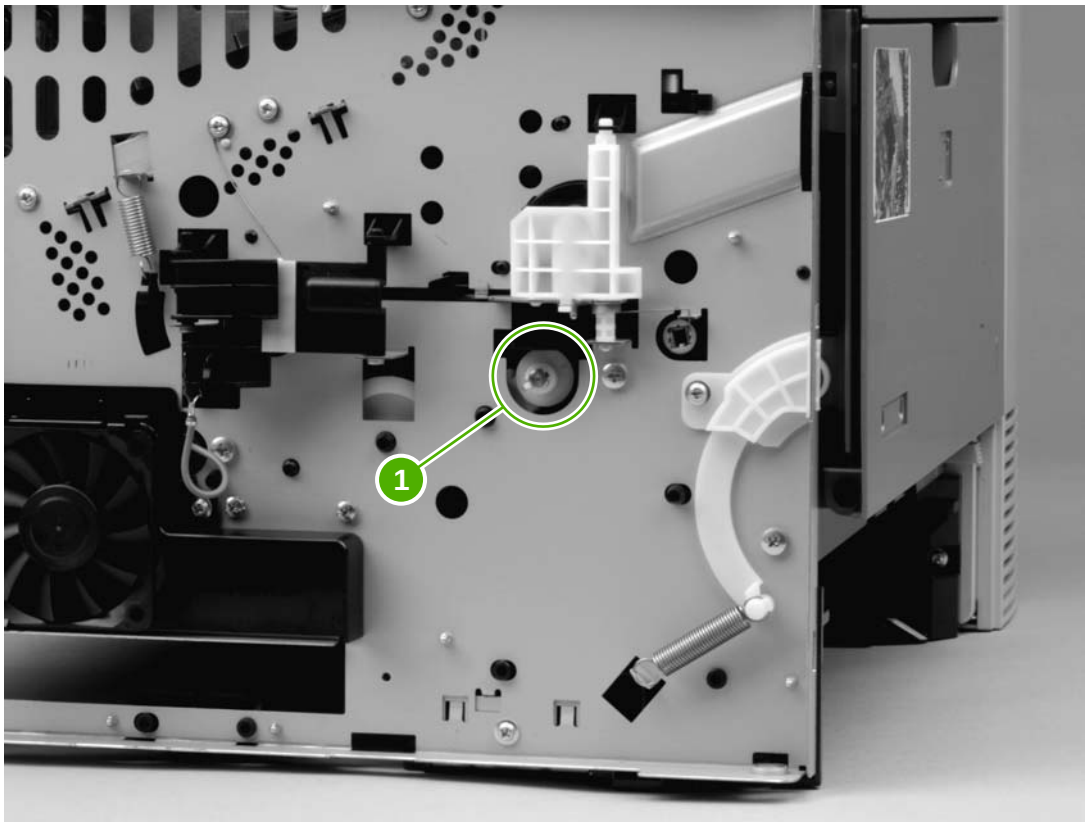
**CAUTION:** Be careful not to touch the surface of the new transfer roller.

**Reinstallation tip** Align the springs with the tabs on the bottom of the roller-mounts before pressing the roller into place.

# Registration assembly

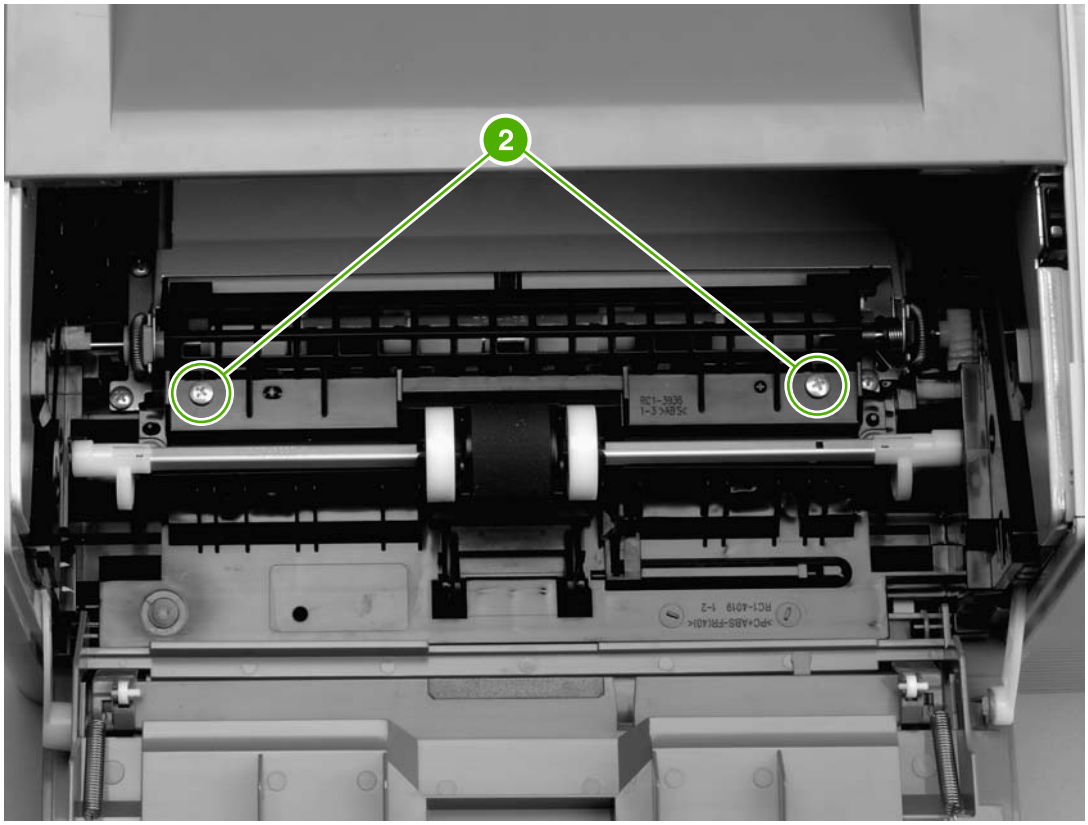
1. Remove the following components:
   - Right-side cover (see Right-side cover on page 114)
   - Formatter shield (see Formatter shield on page 115)
   - Fax cover (see Fax cover on page 116)
   - Left-side cover (see Left-side cover on page 117)
   - ADF/scanner assembly (see Scanner assembly on page 110)
2. Unhook the clasp on the registration assembly gear (callout 1), and then slide the gear off of the shaft.

**Figure 5-98** Removing the registration assembly (1 of 3)



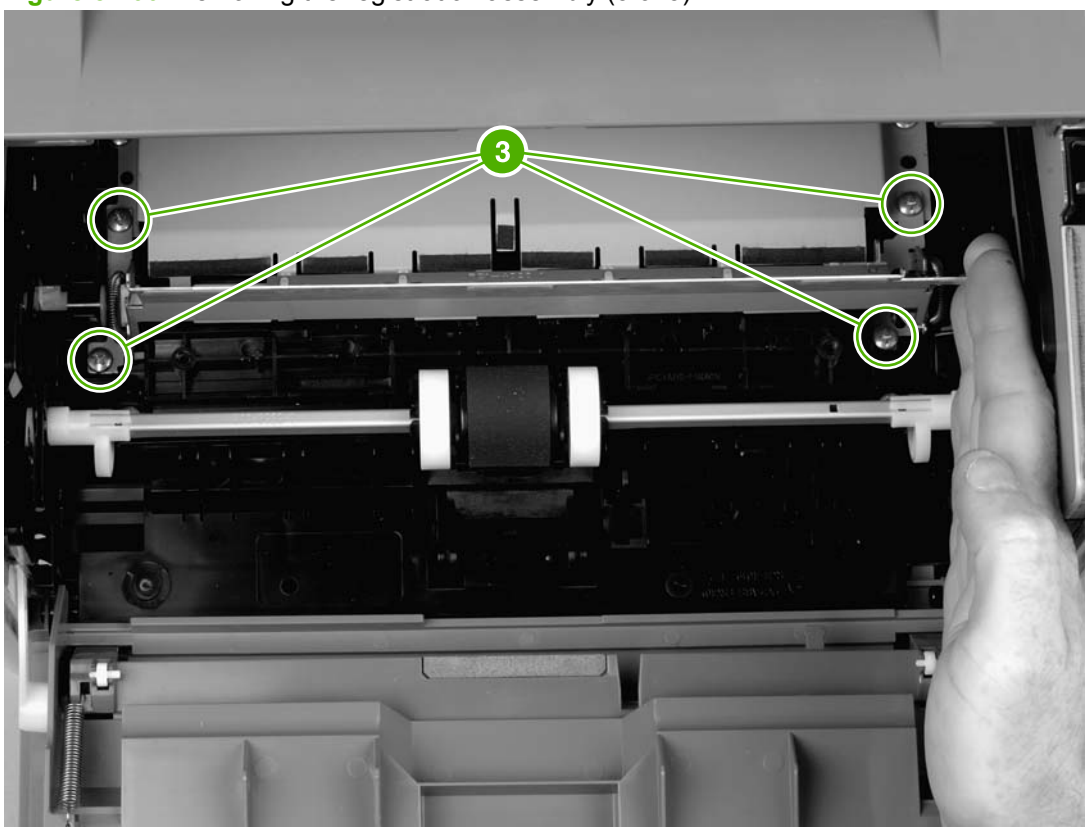
3. Remove two screws (callout 2) from the registration-assembly cover, and then lift the cover out of the device.

**Figure 5-99** Removing the registration assembly (2 of 3)



4. Remove four screws (callout 3).

**Figure 5-100** Removing the registration assembly (3 of 3)

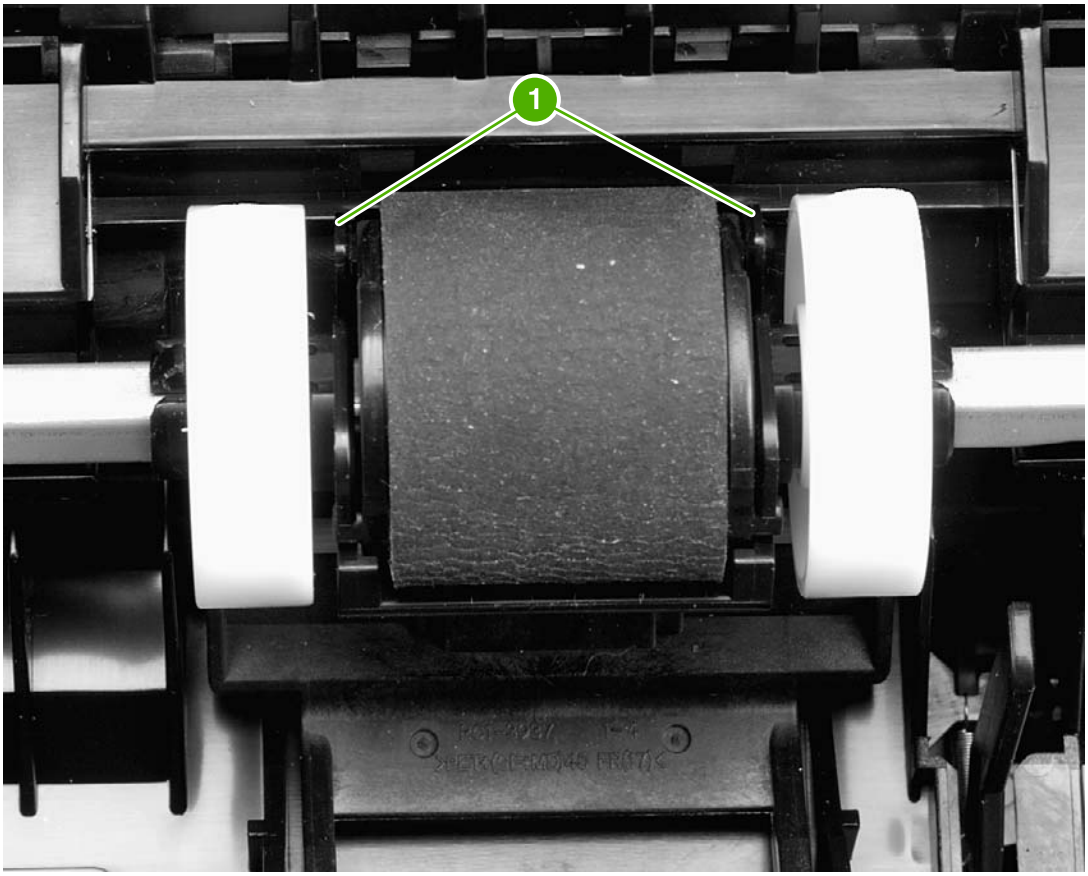



5. Lift the registration assembly out of the device, gear-end first.

# Tray 1 pickup roller

1. Spread the pickup-roller locks (callout 1) on each side of the tray 1 pickup roller to release the roller.

**Figure 5-101** Removing the tray 1 pickup roller



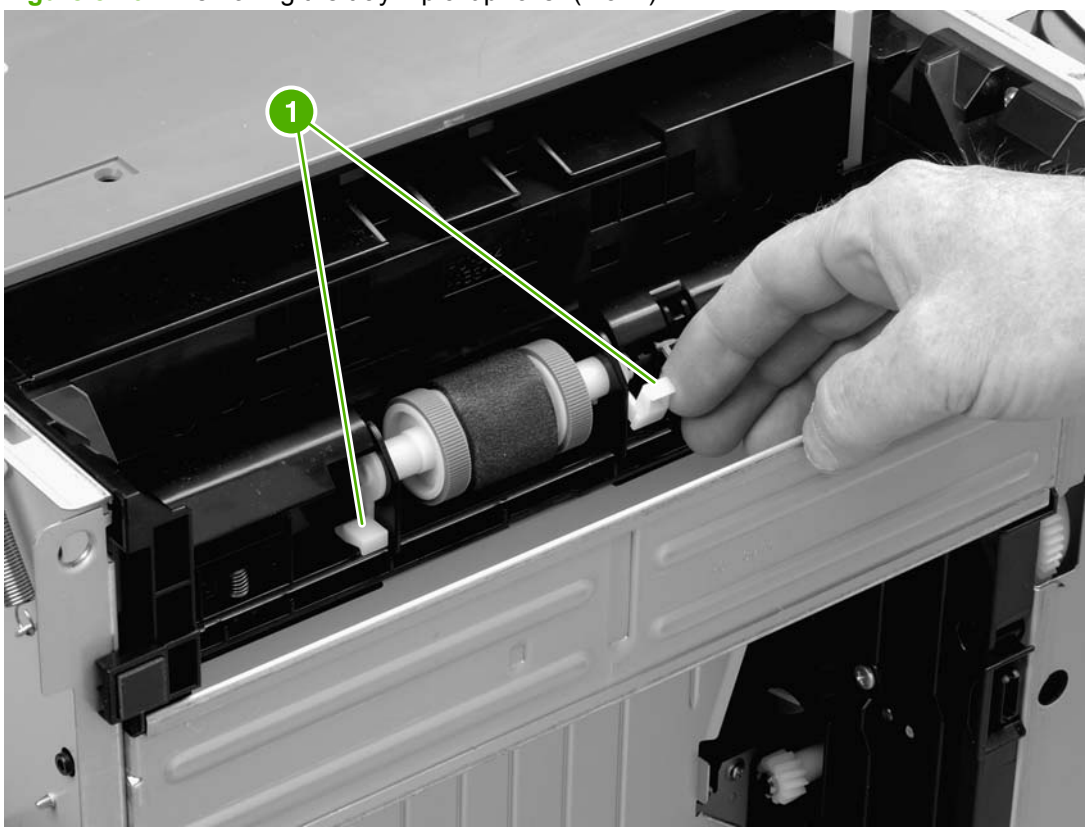

2. Rotate the top of the roller off of the shaft, and then lift the roller out of the device.

# Tray 2 pickup roller

**NOTE:** Also follow these instructions to remove any optional-tray pickup rollers.

1. Tip the device over on its rear side, with the top of the device facing you.
2. Rotate the bushings (callout 1) on each side of the roller upward.

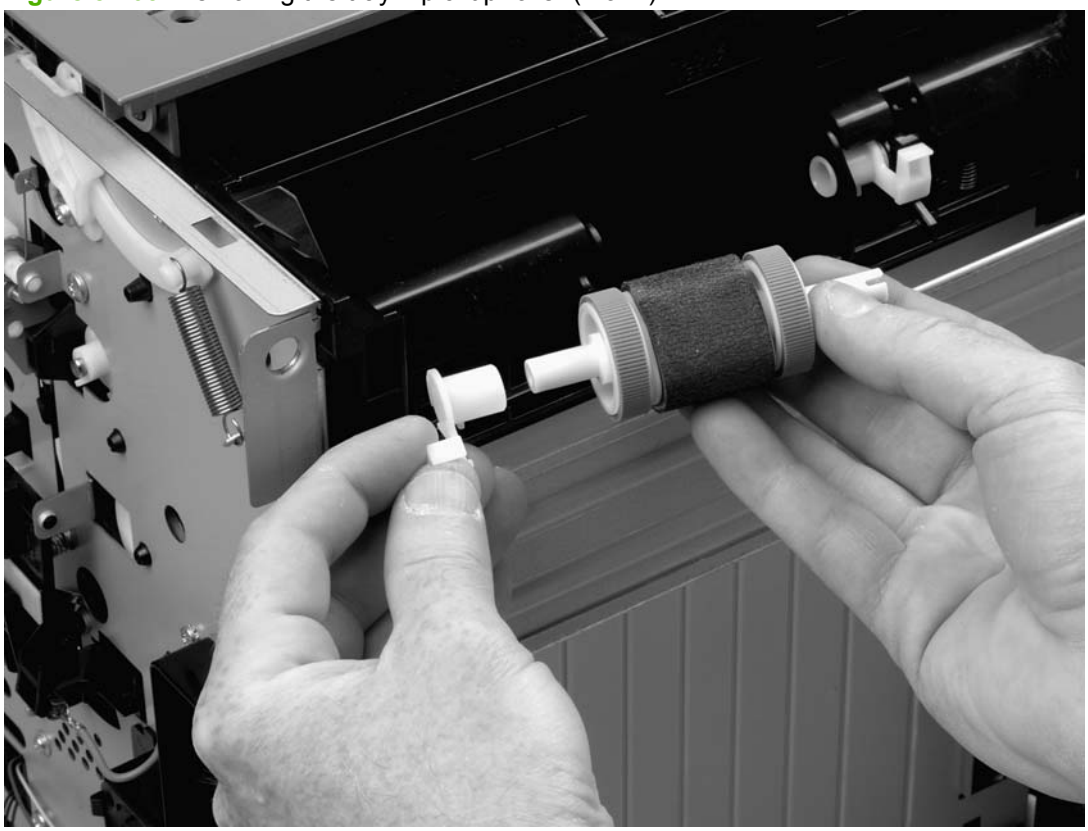
**Figure 5-102** Removing the tray 2 pickup roller (1 of 2)




3. Remove the left-side bushing by sliding the bushing to the left.
4. Slide the roller and shaft toward the left until they clear the hole in the right-side bushing, and then lift the right end of the shaft.

5. Slide the roller and shaft toward the right, and then lift the roller and shaft together out of the device.

**Figure 5-103** Removing the tray 2 pickup roller (2 of 2)

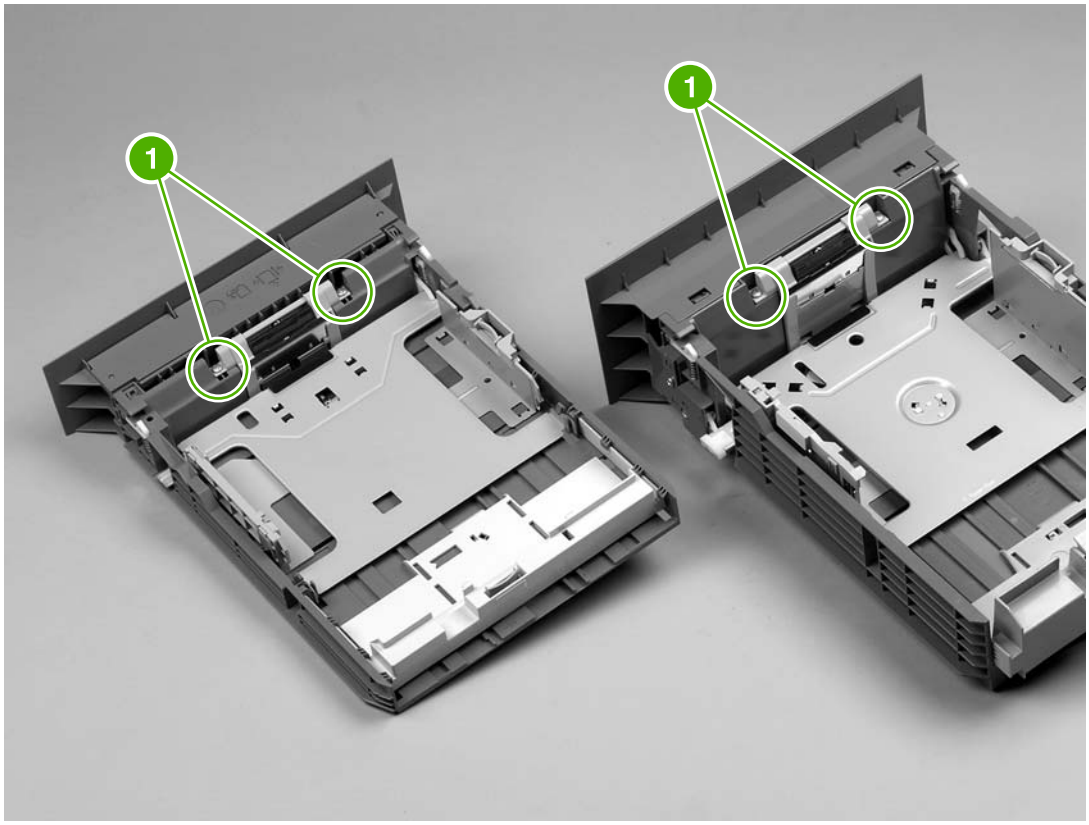


# Separation pad

**NOTE:** To replace a separation pad, replace the entire separation-pad assembly.

1. Pull the tray out of the device.
2. Remove two screws (callout 1) from the separation-pad assembly.

**Figure 5-104** Removing the separation pad




3. Lift the assembly out of the tray.

# 6 Troubleshooting

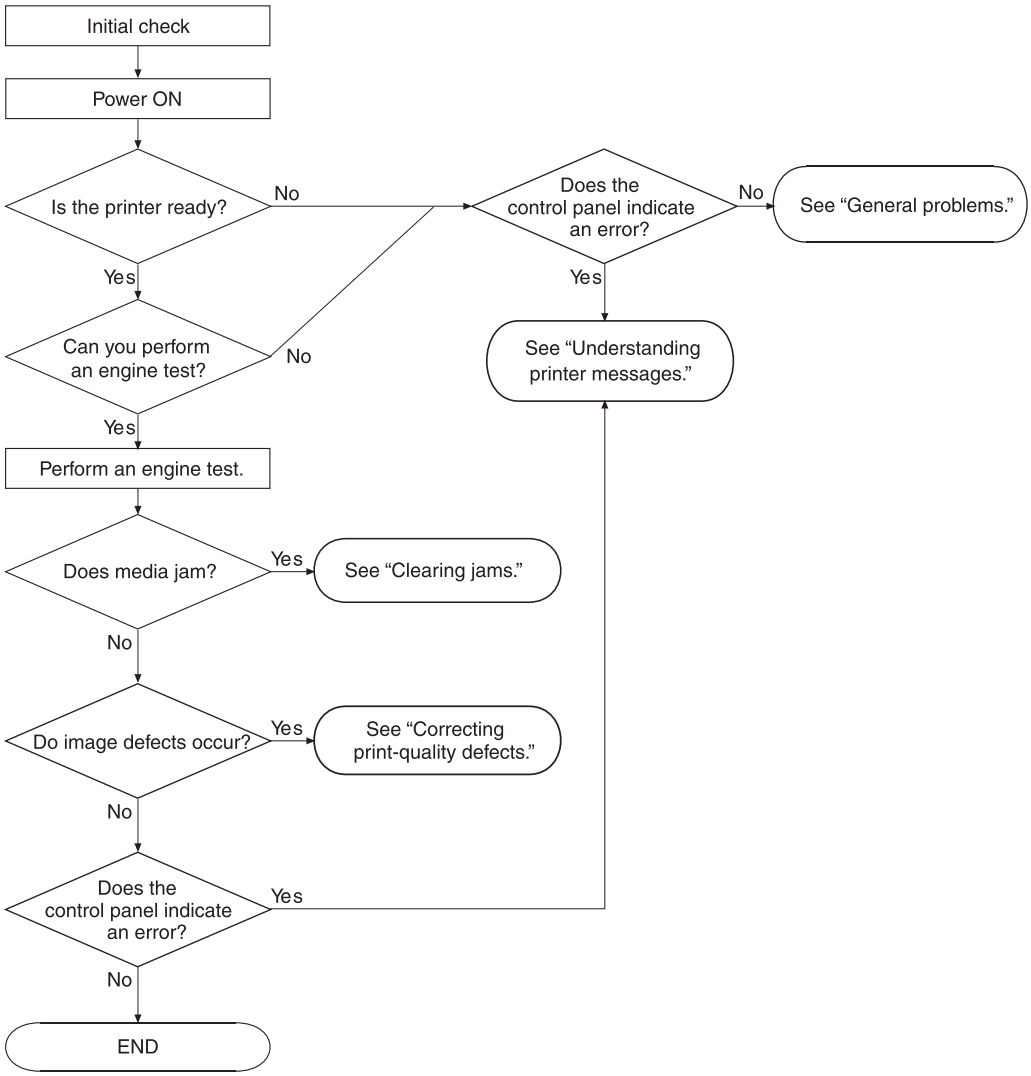
## Chapter contents


- Troubleshooting process
- Control-panel messages
- Clear jams
- Interface troubleshooting
- Service mode functions
- Troubleshooting tools
- Firmware updates and recovery
- Troubleshoot general printing problems
- Troubleshoot media-handling problems
- Troubleshoot print-quality problems
- Troubleshoot fax problems
- Diagrams

# Troubleshooting process

## Troubleshooting tree

**Figure 6-1** Basic troubleshooting



# Troubleshooting flowchart

If the device is not responding correctly, use the flowchart to determine the problem. If the device does not pass a step, follow the corresponding troubleshooting suggestions.

## 1. Does the control-panel display show READY?

| | |
|---|---|
| **YES →** | Go to step 2. |
| **NO↓** | |
| **The control-panel display is blank, and the device fan is off.** | • Turn the device off, and then turn it on again.<br>• Check the power cord connections and the power switch.<br>• Plug the device into a different outlet.<br>• Check that the power supplied to the device is steady, and meets device specifications. (See the user guide.) |
| **The control-panel display appears with no backlighting.** | Check the power connector to the ADF/scanner assembly. |
| **The control-panel display is blank, but the device fan is on.** | • Press a control-panel button to see if the device responds.<br>• Check the ribbon cable to the ADF/scanner assembly.<br>• Turn the device off, and then turn it on again. |
| **The control-panel display is in the wrong language.** | • Turn the device off, and then turn it on again. When XXX MB appears on the control-panel display, press and hold down the 6 key until all three lights remain illuminated. This could take up to 10 seconds. Then, release the 6 key. Use the 3 and 9 keys to scroll to Language and then press the 6 key to select it. Use the 3 and 9 keys to scroll through the available languages to the language you want and then press the 6 key to select it. |
| **The control-panel display shows garbled or unfamiliar characters.** | • Make sure that the appropriate language is selected at the device control panel.<br>• Turn the device off, and then turn the device on again. |
| **A message other than READY appears on the control-panel display.** | • See Control-panel messages on page 217. |

## 2. Can you print a configuration page?

| | |
|---|---|
| **YES →** | **Go to step 3.** |
| **NO↓** | |
| **A configuration page does not print.** | • Verify that all trays are correctly loaded, adjusted, and installed in the device.<br>• At the computer, check the print queue or print spooler to see if the device has been paused. If problems exist with the current print job, or if the device is paused, a configuration page will not print. Press Stop and try again to print a configuration page.) |
| **A blank page prints.** | • Verify that the sealing tape was removed from print cartridge. (See the getting started guide or the instructions that came with the print cartridge.)<br>• The print cartridge might be empty. Install a new print cartridge. |
| **A message other than READY or PRINTING CONFIGURATION appears on the control-panel display.** | • See Control-panel messages on page 217. |

## 3. Does the device copy?

| | |
|---|---|
| **YES →** | **Go to step 4.** |
| **NO↓** | |
| **Copy button on the control panel display is grayed out.** | 1. Check the connections at the hard disk drive.<br>2. Check cables for loose connections or damage.<br>3. Verify functionality of the hard disk drive by performing a disk initialization.<br>4. Replace the hard disk drive as needed.<br>5. Replace the formatter as needed. |
| **Poor copy quality from the ADF.** | 1. If the print quality from the internal tests and the copy from the flatbed were acceptable, clean the ADF scanning strip. See the English version of the service manual.<br>2. If the ADF is damaged, replace the ADF (see ADF assembly on page 100). |
| **Media does not move smoothly through the ADF path.** | 1. Make sure that the media meets HP specifications.<br>2. Clean the ADF roller and separation pad. See the English version of the service manual.<br>3. If the problem persists, replace the ADF roller.<br>4. If the problem persists, replace the ADF (see ADF assembly on page 100). |
| **Poor copy quality from the flatbed.** | 1. If the print quality from the internal tests and the copy from the ADF were acceptable, clean the flatbed glass. See the English version of the service manual.<br>2. If, after performing the maintenance, the problem persists, see the user guide.<br>3. If the problem persists, replace the scanner assembly (see Scanner assembly on page 110). |

## 4. Does the device send a fax?

| | |
|---|---|
| **YES →** | **Go to step 5.** |
| **NO↓** | |
| **The telephone line is not operational or the device is not plugged into the telephone line.** | Verify that the device is plugged into a telephone line that operates correctly. |
| **The telephone cord is faulty or is plugged into the wrong connector.** | 1. Verify that the device is connected to an analog fax line.<br>2. Try plugging the telephone cord into the other connector.<br>3. Try a new telephone cord. |
| **The fax number is incorrect or incomplete.** | Check the fax number and re-enter the correct and complete fax number. |
| **Sent fax is incomplete or of poor quality.** | See the user guide. |
| **The device fax settings are set incorrectly.** | Review the device fax settings. See the *HP LaserJet Analog Fax Accessory 300 User Guide*. |
| See Troubleshoot fax problems on page 282 for additional fax troubleshooting information. | |
| If the error persists, replace the fax accessory (see Fax accessory on page 130. | |

## 5. Does the device receive a fax?

| | |
|---|---|
| **YES →** | **Go to step 6.** |
| **NO↓** | |
| **Too many telephone devices are plugged in, or telephone devices are not connected in the correct order.** | Make sure that the device is the only device on the telephone line and try again to receive the fax. |
| **The telephone cord does not meet specifications.** | Verify that the device is connected to an analog fax line. |
| **The device fax settings are set incorrectly.** | Review the device fax settings. See the user guide. |
| **The analog phone line might not be functional.** | Use a phone to call the number and see if the fax answers. |
| See Troubleshoot fax problems on page 282 for additional fax troubleshooting information. | |
| If the error persists, replace the fax accessory (see Fax accessory on page 130). | |

## 6. Can you print from a program?

| YES → | Go to step 4. |
|---|---|
| NO ↓ | |
| **The job will not print.** | • If the job will not print, and a message appears on the control-panel display, see Control-panel messages on page 217.<br>• By using the computer, check to see if the device has been paused. Press Stop to continue.<br>• If the device is on a network, print a configuration page. If an HP Jetdirect print server is installed, a Jetdirect page also prints. Check the Jetdirect configuration page to verify that the network protocol status and settings are correct for the device.<br>• If the device is on a network, check that you are printing to the correct device. To verify that no network problem exists, connect the computer directly to the device<br>• Check the interface cable connections. Disconnect and reconnect the cable at the computer and the device.<br>• Test the cable by trying it on another computer.<br>• Make sure that the print job is being sent to the correct port (LPT1 or network printer port, for example).<br>• Make sure that you are using the correct printer driver. (See the user guide.)<br>• Reinstall the printer driver. (See the getting started guide.)<br>• Check that the computer port is configured and working correctly. (Try connecting another device to that port and printing.)<br>• If you are using the PS driver to print, set **Print PS Errors** (on the **General Print Behavior** submenu of the **Device Behavior** menu), to **On** and then try again to print the job.<br>• Make sure that **Personality** (on the **General Print Behavior** submenu of the **Device Behavior** menu) is set to **Auto**.<br>• You might be missing a device message that could help you solve the problem. On the **Warning/Error Behavior** submenu (of the **Device Behavior** menu) at the device control panel, temporarily turn off the **Clearable Warnings** and **Auto-Continuable Events** settings. Then try again to print the job. |
| **A PS error page or list of commands prints.** | • The device might have received a nonstandard PS code. For this print job, set the **Personality** (on the **General Print Behavior** submenu of the **Device Behavior** menu) to **PS**. After the job has printed, return the setting to **Auto**.<br>• Make sure that the print job is a PS job, and that you are using the PS driver.<br>• The device might have received PS code although it is set to PCL. Set **Personality** (on the **General Print Behavior** submenu of the **Device Behavior** menu) to **Auto**. |

## 7. Does the job print as expected?

| | |
|---|---|
| **YES→** | **Go to step 5.** |
| **NO↓** | |
| **Print is garbled, or only a portion of the page prints.** | • Make sure that you are using the correct printer driver. (See the user guide.)<br>• The data file that was sent to the device might be corrupt. To check, try printing the file to another device (if possible), or try a different file.<br>• Check the interface cable connections. Test the cable by trying it on another computer (if possible).<br>• Replace the interface cable with a high-quality cable.<br>• Simplify the print job, print at a lower resolution, or install more device memory.<br>• You might be missing a device message that could help you solve the problem. On the **Warning/Error Behavior** submenu (of the **Device Behavior** menu) at the device control panel, temporarily turn off the **Clearable Warnings** and **Auto-Continuable Events** settings. Then, print the job again. |
| **Printing stops in the middle of the job.** | • Stop might have been pressed.<br>• Check that the power supplied to the device is steady, and that it meets device specifications. (See the specifications in the English Service Manual.) |
| **Print speed is slower than expected.** | • Simplify the print job.<br>• Add more memory to the device.<br>• Turn banner pages off. (See the network administrator.)<br>• Note that slower speeds should be expected if you are printing narrow paper, printing from tray 1, using the HIGH 2 fuser mode, or if you have set Small Paper Speed to SLOW. |
| **A control-panel setting is not taking effect.** | • Check settings in the printer driver or program. (The printer driver and program settings override control-panel settings.) |
| **The print job is not formatted correctly.** | • Check that you are using the correct printer driver. (See the user guide.)<br>• Check the program settings. (See the program online Help.)<br>• Try a different font.<br>• Downloaded resources might have been lost. You might need to download them again. |
| **Media does not feed correctly or is damaged.** | • Make sure that the media is loaded correctly and that the guides are not too tight or too loose against the stack of media.<br>• If you are having problems printing custom-size paper, see the user guide.<br>• If pages are wrinkled or curled, or if the image is skewed on the page, see Troubleshoot print-quality problems on page 269. |
| **Print-quality problems occur.** | • Adjust the print resolution. (See the user guide.)<br>• Check that Resolution Enhancement Technology (REt) is on. (See the user guide.)<br>• Go to Troubleshoot print-quality problems on page 269. |

## 8. Does the device select the correct trays?

| | |
|---|---|
| **YES →** | **For other problems, check the table of contents or the index in this manual, or see the printer-driver online Help.** |
| **NO↓** | |
| **The device pulls media from the wrong tray.** | • Make sure that you have selected the correct tray. (See the user guide.)<br>• Make sure that trays are correctly configured for size and type. (See the user guide.) Print a configuration page to see current tray settings.<br>• Make sure that the tray selection (Source) or Type in the printer driver or program is set correctly. (The printer driver and program settings override the device control-panel settings.)<br>• By default, media loaded in tray 1 will be printed first. If you do not want to print from tray 1, remove any media loaded in the tray or change the **USE REQUESTED TRAY** setting. (See the user guide.) Change **TRAY 1 SIZE** and **TRAY 1 TYPE** to a setting other than **ANY**. |
| **An optional tray is not working correctly.** | • Print a configuration page to verify that the tray is installed correctly and is functional.<br>• Configure the printer driver to recognize the installed tray. (See the printer driver online Help.)<br>• Turn the device off, and then turn it on again.<br>• Verify that you are using the correct optional tray for the device. |
| **A message other than READY appears on the control-panel display.** | • See Control-panel messages on page 217. |

# Control-panel messages

## Control-panel message types

Four types of control-panel messages can indicate the status of or problems with the device.

| Message type | Description |
|---|---|
| Status messages | Status messages reflect the current state of the device. They inform you of normal device operation and require no interaction to clear them. They change as the state of the device changes. Whenever the device is ready, not busy, and has no pending warning messages, the status message **Ready** appears if the device is online. |
| Warning messages | Warning messages inform you of data and print errors. These messages typically alternate with the **Ready** or status messages and remain until you touch OK. Some warning messages are clearable. If **Clearable Warnings** is set to **Job** on the device Device Behavior menu, the next print job clears these messages. |
| Error messages | Error messages communicate that some action must be performed, such as adding paper or clearing a jam.<br><br>Some error messages are auto-continuable. If **Auto Continue** is set on the menus, the device will continue normal operation after an auto-continuable error message appears for 10 seconds.<br><br>**NOTE:** Pressing any button during the 10-second auto-continuable error message overrides the auto-continue feature, and the button function takes precedence. For example, pressing the Stop button pauses printing and offers the option to cancel the print job. |
| Critical-error messages | Critical error messages inform you of a device failure. Some of these messages can be cleared by turning the device off and then on. These messages are not affected by the **Auto Continue** setting. If a critical error persists, service is required. |

## Resolve control-panel messages

**Table 6-1 Control-panel messages**

| Control panel message | Description | Recommended action |
|---|---|---|
| Digital Send Server is not Responding. Contact Administrator. | The device cannot communicate with the Digital Send Server. | Contact the network administrator. |
| **10.10.00 ERROR** | The device cannot read or write to the print cartridge e-label, or the e-label is missing from the print cartridge. | 1. Verify that a genuine HP print cartridge is installed in the device.<br>2. Verify that the memory tag PCA is installed in the device.<br>3. Verify that the memory tag connector is firmly seated in connector J510 on the ECU. You might have to remove the main cooling fan to see this connection. |
| **10.32.00 - Unauthorized Supply** | A supply has been installed that does not pass the authentication test for genuine HP supplies. | If you believe you purchased a genuine HP supply, visit us at www.hp.com/go/anticounterfeit. Any repair required as a result of using non-HP supplies or unauthorized supplies is not covered under warranty. HP cannot ensure the accuracy or the availability of certain features.<br><br>To continue printing, touch **OK**. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **11.XX - Internal clock error To continue touch OK** | The device real time clock has experienced an error. | Whenever the device is turned off and then turned on again, set the time and date at the control panel. See the Time/Scheduling menu in the user guide.<br><br>If the error persists, you might need to replace the formatter. |
| **13.01.00 - Jam in Tray 1 Clear jam then touch OK** | The paper did not reach the top of page sensor within the specified period of time. The tray 1 feed roller moves paper into the paper path. When solenoid SL1 is energized, a clutch mechanism allows the paper stack in tray 1 to lift, and then allows the feed roller to rotate one time to move the paper into the paper path. | 1. Follow the instructions in the onscreen dialog box, or see Clear jams from the input-tray areas on page 241.<br>2. Verify that the type and quality of the media that you are using meet HP specifications. (See General media specifications on page 17.)<br>3. Verify that the media is loaded correctly and that the guides are not too tight or too loose against the stack of media.<br>4. Verify that the tray 1 pickup roller and separation pad are installed correctly.<br>5. Verify that solenoid SL1 is firmly seated in ECU connector J508. Verify that SL1 is being energized by removing the cover and observing the solenoid during a feed operation.<br>6. Open and close the cartridge door to clear the error message. |
| **13.01.00 - Jam in Tray 2 Clear jam then touch OK** | The paper did not reach the top of page sensor (PS901) within the specified period of time. The tray 2 feed roller moves paper into the paper path when solenoid SL2 is energized. The stack of paper is continuously all the way up to the top based on the spring-loaded trays mechanism.<br><br>**NOTE:** This error message can be generated during the re-installation process of the HVPS by not connecting properly the top of the page sensor (PS901). The printer may feed three pages with no image on them, and then jam with a **13.01.00** error message. | 1. Follow the instructions in the onscreen dialog box.<br>2. Verify that the type and quality of the media you are using meet HP specifications.<br>3. Verify that the media is loaded correctly and that the guides are not too tight or too loose against the stack of media.<br>4. If tray 3 is available, feed from it and test the paper path.<br>5. Verify that solenoid SL2 is firmly connected in ECU connector J504. Replace solenoid as needed.<br>6. Check the tray 2 pick up roller and separation pad for proper installation. Make sure both parts are cleaned and free of paper dust. Replace pick up roller or pick up assembly as needed. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **13.01.00 - Jam in Tray 3 Clear jam then touch OK** | The paper did not reach the top of page sensor (PS901) within the specified period of time. The tray 3 feed roller moves paper into the paper path when solenoid SL3 is energized. The stack of paper is continuously all the way up to the top based on the spring-loaded trays mechanism<br><br>**NOTE:** This error message can be generated during the re-installation process of the HVPS by not connecting properly the top of the page sensor (PS901). The printer may feed three pages with no image on them and then jam with this error message. | 1. Follow the instructions in the onscreen dialog box.<br>2. Verify that the type and quality of the media you are using meet HP specifications.<br>3. Verify that the media is loaded correctly and that the guides are not too tight or too loose against the stack of media.<br>4. If tray 2 is available, feed from it and test the paper path.<br>5. Verify that connector J406 at the ECU is firmly connected. This harness/ connector comes from the optional tray 3 connector located underneath the printer.<br>6. Check internal connection of solenoid SL3 inside the right side panel of optional tray 3. Replace solenoid as needed. Check connector underneath printer where the optional tray 3 gets connected to the engine.<br>7. Check the tray 3 pick up roller and separation pad for proper installation. Make sure both parts are cleaned and free of paper dust. Replace pick up roller as needed. |
| **13.05.00 - Jam inside front door (inside paper path); open back door** | Paper failed to reach the delivery sensor (SR2) located inside the fuser assembly within the specified period of time when a print job was initiated. When troubleshooting paper jams, always observe where the leading edge of the paper stops in the jam; in this case, the leading edge of the paper will barely make it out of the fuser, stopping right after the mechanical flag that activates the SR2 sensor. | 1. Follow the instructions in the onscreen dialog box.<br>2. Verify that nothing is affecting paper movement within the paper path.<br>3. Verify that the fuser motor (M2) connector is firmly seated. The fuser motor wiring is hard-wired to the back of the ECU at connector J501. The motor connector is free-standing behind the ECU. To see if the fuser motor is functional, observe the output stacker rollers while turning on the device. If the rollers rotate, the motor is functional. If they do not rotate, verify the connection.<br>4. Verify that the mechanical sensor flag moves freely and that it is not broken.<br>5. Make sure the sensor (SR2) is properly seated on its place inside the fuser assembly. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **13.15.00 - Jam inside front door Remove print cartridge** | Paper is jammed in the fuser area at power on, or the sensor (SR2) is defective and or its connections | 1. Follow the instructions in the onscreen dialog box.<br>2. Make sure the sensor (SR2) at the fuser is properly connected in the following places:<br>◦ Inside the fuser: At physically at the sensor (SR2).<br>◦ At the chassis: From the rear of the engine at the right hand side.<br>◦ At the ECU, connector J405 (remove the left side panel and check the connection): Check the wiring diagram for a good reference and the ECU connector description diagram. |
| **13.20.00 - Jam inside rear bin, clear jam and then open and close front door** | Media is jammed inside the paper path without a specific location.<br>**NOTE:** This error code will always show up right after the front door gets opened and closed when looking for a jammed paper. The message means there was a jam condition and an attempt to clear it, but the paper did not get removed successfully so there is paper inside the paper path. This error is indicating to check everywhere possible. | 1. Open the rear output bin and gently remove the jammed media. Follow the instructions in the onscreen dialog box.<br>2. Check the entire paper path and its sensors.<br>3. If the error persists without having any paper inside the paper path, there is the high possibility that a sensor is either unplugged or broken. |
| **13.31.00 - Jam inside rear bin, clear jam and then open and close front door** | Media is jammed in the paper path<br>**NOTE:** This error message can normally be generated when the rear output bin sensor (PS1) is not connected or defective and a customer sends a job to be delivered face down, but the rear output bin is open for face-up delivery. In this case, since PS1 is not working, the engine does not know that the rear output bin is open, so the system is waiting for the paper to trigger the PS4 delivery sensor (which never happens). This error code will be shown as well when the face-up rear output bin is closed and the job being sent contains more than one sheet of paper. The system will work with jobs of one sheet. | 1. Follow the instructions in the onscreen dialog box. If the message persists, check the rear door (face-up bin) sensor cable connection.<br>2. Check the connection of the PS1 sensor.<br>3. Make sure the plastic actuator of the rear output bin door is not broken or bent. Replace the rear door as needed. |
| **13.65 - Jam inside rear bin Clear jam then open and close front door** | Media is jammed in the fuser area. | Open the rear output bin and gently remove the jammed media. Follow the instructions in the onscreen dialog box, or see Clear jams from the output-bin areas on page 244.<br>If the message persists, check the thermistor delivery sensor (J405) and delivery sensor (SR2) cable connections. |
| **13.67.00 - Jam inside front door** | Media is jammed in the paper path. | Follow the instructions in the onscreen dialog box, or see Clear jams from the print-cartridge area on page 240. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | | If the message persists, check the HVPS ribbon-cable connection at J404. |
| **20 Insufficient memory To continue touch OK** | The device received more data than can fit in the available memory. You might have tried to transfer too many macros, soft fonts, or complex graphics. | Touch OK to print the transferred data (some data might be lost), and then simplify the print job or install additional memory. |
| **21 Page too complex To continue touch OK** | The page formatting process was not fast enough for the device. | Touch OK to print the transferred data. (Some data might be lost.) If this message appears often, simplify the print job. |
| **22 EIO <X> buffer overflow To continue touch OK** | Too much data was sent to the EIO card in the specified slot (X). An incorrect communications protocol might be in use. | Touch OK to print the transferred data. (Some data might be lost.)<br><br>Check the host configuration. If this message persists, you might have to replace the EIO card. |
| **22 Embedded I/O buffer overflow To continue touch OK** | Too much data was sent to the embedded HP Jetdirect print server. | Touch OK to print the transferred data. (Some data might be lost.) |
| **22 USB I/O buffer overflow To continue touch OK** | Too much data was sent to the USB buffer. | Touch OK to clear the error message. (Data will be lost.) |
| **30.1.1** | The scanner flatbed cover is open | 1. If the cover is open, close the cover.<br>2. If the cover is closed, check the cover sensor at the left rear of the scanner for correct mechanical functionality.<br>3. Use the sensors tests available via the control panel (**Administration** > **Troubleshooting** > **Scanner Tests** > **Sensors**).<br>4. Replace the scanner assembly if the sensor test fails. |
| **30.1.15** | Scanner initialization failed. Scanner control-board failure. | 1. Turn off the device and then turn on the device.<br>2. Check the connections between the scanner assembly and the formatter.<br>3. If the message persists, replace the scanner assembly. |
| **30.1.18** | An error occurred on the scanner control board PCA. The ASIC on the scanner control board has failed. | 1. Turn off the device and then turn on the device.<br>2. Perform a firmware upgrade (RFU).<br>3. If the message persists, replace the scanner assembly. |
| **30.1.19** | An error occurred at the scanner lamp. | 1. Check the connections between the scanner assembly and the formatter.<br>2. Turn off the device and then turn on the device. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | | 3. Verify that the scanner lamp turns on using the troubleshooting menus (**Administration** > **Troubleshooting** > **Scanner Tests** > **Lower Lamp**).<br>4. If the message persists, replace the scanner assembly. |
| **30.1.2** | Jam in document feeder.<br>**NOTE:** Appears as 30.01.02 on the event log.<br>This error code has nothing to do with the scanner functionality; this is directly related to a jam condition either being generated by the device or the original being copied. | 1. Clear the jam, following the instructions on the control panel display or the instructions in this manual.<br>2. If the ADF continues to jam, make sure that the document meets media specifications for the ADF.<br>3. Open the ADF cover and inspect the paper path for damage or obstructions.<br>4. Check the pickup rollers and separation pad for excessive wear or contamination. Replace if necessary.<br>5. Check the ADF paper-path sensors for correct operation (**Administration** > **Troubleshooting** > **Scanner Tests** > **Sensors**).<br>6. Check the connections from the ADF to the scanner for loose connections.<br>7. Make sure the originals being copied are within the specs: no staples, no excessive wrinkles, no paper clips, etc.<br>8. If, after performing all of the previous steps, the ADF continues to jam, replace the ADF assembly. |
| **30.1.23** | Calibration failed. A scanner calibration error has occurred. | 1. Check the calibration target for correctness and re-run the scanner calibration.<br>2. Look for image skew.<br>3. Check input trays for proper paper size. |
| **30.1.24** | Document feeder cover is open. The ADF jam-access door is open. | 1. Clear the jam and close the ADF jam access door.<br>2. Check the ADF cover sensor and the flag for correct mechanical functionality.<br>3. Check the ADF cover sensor for correct operation (**Administration** > **Troubleshooting** > **Scanner Tests** > **Sensors**).<br>4. If, after performing all of the previous steps, replace the ADF assembly. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **30.1.25** | A general error has occurred in the scanner or the ADF.<br><br>Communication was lost between the scanner control board (SCB) and the formatter. | 1. Turn off the device and then turn on the device.<br>2. Check the connections between the scanner assembly and the formatter.<br>3. If the message persists, replace the scanner assembly.<br>4. Check the formatter board. The copy control board CPB is embedded in the formatter board. |
| **30.1.3** | Document feeder pick error. The ADF could not pick up the document.<br><br>**NOTE:** Appears as 30.01.03 on the event log.<br><br>This error code has nothing to do with the scanner functionality; this is directly related to a jam condition either being generated by the device or the original being copied. | 1. Clear the jam, following the instructions on the control panel display or the instructions in this manual<br>2. If the ADF continues to jam, make sure that the document meets media specifications for the ADF.<br>3. Open the ADF cover and inspect the paper path for damage or obstructions.<br>4. Check the pickup rollers and separation pad for excessive wear or contamination. Replace if necessary. |
| **30.1.34** | Loss of communication with the formatter or cable error. | 1. Turn off the device and then turn on the device.<br>2. Check the connections between the scanner assembly and the formatter.<br>3. Make sure that the hard disk drive on the formatter is connected correctly and that the hard disk is functioning correctly.<br>4. This error condition can be related to network traffic at the customer site; isolate the MFP from the network and troubleshoot accordingly.<br>5. If the message persists, replace the scanner assembly. |
| **30.1.7** | Communication error | 1. Turn off the device and then turn on the device.<br>2. Check the connections between the scanner assembly and the formatter.<br>3. Make sure that the hard disk drive on the formatter is connected correctly and that the hard disk is functioning correctly.<br>4. If the message persists, replace the scanner assembly. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **30.1.8** | Scanner optical unit position error. | 1. Check the scanner lock (left rear side of scanner glass) to verify that it is in the unlocked position.<br>2. Turn off the device and then turn on the device.<br>3. Verify that the optical unit moves freely (**Administration** > **Troubleshooting** > **Scanner Tests** > **Flatbed Motor**).<br>4. If the message persists, replace the scanner assembly. |
| **40 EIO <X> bad transmission To continue touch OK** | The connection between the device and the EIO card in the specified slot has been broken. | Touch OK to clear the error message and continue printing. Check the EIO connection. |
| **40 Embedded I/O bad transmission To continue touch OK** | A temporary printing error has occurred. | 1. Turn the device off, and then turn the device on.<br>2. If this message persists, replace the formatter (see Formatter on page 135). |
| **41.3 - Load tray <XX> To use another tray, touch OK** | The specified tray does not contain the specified media size. | Touch OK to use a tray that contains media of the correct size. |
| **41.3 - Load tray <XX>: <Type>, <Size>** | The specified tray is loaded with media that is longer or shorter in the feed direction than the size configured for the tray. | Touch OK to display **Tray <X> Size**. Reconfigure the size in a tray so that the device will use a tray that is loaded with the size of media required for the print job. If the message does not clear automatically from the control-panel display, turn the device off, and then turn the device on. |
| **41.X Error To continue touch OK** | A temporary printing error occurred.<br>**X description**<br>**2** beam detect misprint<br>**8** fuser too hot | 1. Touch OK to clear the error. If the error is not cleared, turn the device off, and then turn the device on.<br>2. If the message persists, replace the fuser (see Fuser on page 156). |
| **49.XXXXX Error To continue turn off then on** | A critical firmware error has occurred.<br>This type of error can be caused by invalid print commands, corrupt data, or invalid firmware operations.<br>**NOTE:** In many cases, turning the power off and then on will permanently clear most 49 errors.<br>In some instances, electrical noise in the cable can corrupt data during transmission to the device. Other causes include poor-quality USB cables, poor connections, or specific software problems.<br>Sometimes, the formatter is at fault, which is usually indicated by a 79 Error message. | 1. Turn the MFP off, and then turn the MFP on.<br>**NOTE:** Turning the power off and then on will clear most 49 errors.<br>2. Upgrade the firmware.<br>3. Try printing a job from a different software program. If the job prints, go back to the first program and try printing a different file. If the message appears only with a certain software |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | **NOTE:** In most cases, replacing the formatter will not remedy repetitive 49 errors. Very rarely the formatter hardware may be faulty which will be indicated by a 79 Error message. | program or print job, contact the software vendor assistance.<br>4. Do the following:<br>**a.** If the message persists when using different software programs and attempting specific print jobs, disconnect all of the cables that connect the MFP to the network or a computer.<br>**b.** Turn the MFP off.<br>**c.** Remove the DIMM.<br>**d.** Remove any installed EIO devices.<br>**e.** Turn the device on.<br>**f.** If the error message disappears, reinstall the DIMM and EIO devices individually, making sure to turn the device power off and then on again as you install each device.<br>**g.** Replace the component that caused the error message. |
| **50.1 FUSER ERROR** | AC power is not being provided to the fuser assembly. AC voltage is necessary to generate heat in the fuser assembly. | 1. Verify that the connection between the fuser assembly and the ECU is fully seated.<br>2. If the message persists, replace the fuser assembly. |
| **50.6 FUSER ERROR** | The main or sub thermistors are unable to provide temperature feedback to the ECU. The main and sub thermistors monitor the fuser assembly hot-roller temperature and provide feedback to regulate the fusing temperature. | 1. Verify that the seven-wire connector is firmly seated in connector J405 on the ECU. You might have to remove the main cooling fan to see this connection.<br>2. Verify that the four-wire connector is firmly seated in the fuser assembly.<br>3. Verify that the AC voltage is being provided to the fuser assembly.<br>4. If the message persists, replace the fuser assembly. |
| **50.X FUSER ERROR To continue turn off then on** | A fuser error has occurred.<br>**X description**<br>**1** low fuser temperature<br>**2** fuser warmup service<br>**3** fuser over-temperature<br>**4** faulty fuser | 1. Turn the device off, and then turn the device on.<br>2. If the message persists, turn off the device to allow the fuser to cool.<br>3. Verify that the correct model fuser is installed in the device.<br>4. Check the cable connections between the ECU and the fuser. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | **5** incorrect fuser is installed<br><br>**6** open fuser circuit | **5.** If, after checking the cables, the message persists, replace the fuser (see Fuser on page 156).<br><br>**6.** If, after replacing the fuser, the message persists, replace the ECU (see Engine control unit (ECU) on page 148).<br><br>**7.** If, after replacing the ECU, the message persists, replace the high-voltage power-supply (see High-voltage power supply (HVPS) on page 166). |
| **51.XY ERROR To continue turn off then on** | A temporary printing error has occurred. | **1.** Turn the device off, and then turn the device on.<br><br>**2.** Check the cable connections between the laser/scanner and the ECU.<br><br>**3.** If, after checking the cables, the message persists, replace the laser/scanner (see Laser/scanner on page 159).<br><br>**4.** If, after replacing the laser/scanner, the message persists, replace the ECU (see Engine control unit (ECU) on page 148). |
| **52.00 ERROR** | A laser/scanner motor error has occurred. Laser/scanner motor rotation is verified at the initialization of a print job. | **1.** Verify that the laser/scanner motor connector and the ribbon cable from the ECU are firmly seated on the laser/scanner assembly.<br><br>**2.** Verify that the laser/scanner motor connector is firmly seated in connector J402 on the ECU. You might have to remove the main cooling fan to see this connection.<br><br>**3.** Verify that the ribbon cable installed in connector J403 on the ECU is fully seated. You must remove the ECU in order to verify this connection.<br><br>**4.** If, after checking the cables, the message persists, replace the laser/scanner (see Laser/scanner on page 159).<br><br>**5.** If, after replacing the laser/scanner, the message persists, replace the ECU (see Engine control unit (ECU) on page 148). |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **53.XY.ZZ CHECK RAM DIMM SLOT <X> To continue turn off then on** | A problem exists with the device memory. The DIMM that caused the error will not be used.<br><br>**X description**<br><br>**0** onboard memory<br><br>**1** slot 1 | You might need to reinstall or replace the specified DIMM.<br><br>1. Turn the device off, and then replace the DIMM that caused the error.<br><br>2. If, after replacing the DIMM, the message persists, replace the formatter (see Formatter on page 135). |
| **54.XX ERROR To continue turn off then on** | A temporary printing error has occurred. | 1. Turn the device off, and then turn the device on.<br><br>2. If the message persists, check the sensors in the device to make sure that they are working correctly.<br><br>3. If the sensors are working correctly, but the message persists, replace the ECU (see Engine control unit (ECU) on page 148). |
| **55.05 ERROR To continue turn off then on** | The print engine is not communicating with the formatter.<br><br>An error occurred while performing a remote firmware upgrade. | 1. Turn the device off, and then turn the device on.<br><br>2. Try again to perform the remote firmware upgrade. |
| **55.XX.YY DC CONTROLLER ERROR To continue turn off then on** | The print engine is not communicating with the formatter. | 1. Turn the device off, and then turn the device on.<br><br>2. If the message persists, replace the ECU (see Engine control unit (ECU) on page 148).<br><br>3. If, after replacing the ECU, the message persists, replace the high-voltage power-supply (see High-voltage power supply (HVPS) on page 166). |
| **56.XX ERROR To continue turn off then on** | A temporary printing error has occurred. | 1. Turn the device off, and then turn the device on.<br><br>2. If this message persists, uninstall and then reinstall all input trays, and then turn the device off.<br><br>3. Turn the device on. If the message persists, replace the formatter (see Formatter on page 135). |
| **57.03 ERROR To continue turn off then on** | A sub cooling fan (FM2) error has occurred. Fan operation is verified during device power-up. Fan operation occurs only during power-up or during a print job. | 1. Turn the device off, and then turn the device on.<br><br>2. Verify that nothing is hindering or blocking the fan.<br><br>3. Verify that the fan is connected to connector J512 on the ECU PCA. You |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | | might have to remove the main cooling fan to see this connection.<br>4. If the message persists, replace the fan (see Left-side fan on page 165). |
| **57.04 ERROR To continue turn off then on** | A main cooling fan (FM1) error has occurred. Fan operation is verified during device power-up. Fan operation occurs only during power-up or during a print job. | 1. Turn the device off and then on.<br>2. Verify that nothing is hindering or blocking the fan.<br>3. Verify that the fan is connected to connector J509 on the ECU PCA.<br>4. If the message persists, replace the fan (see Right-side fan on page 145). |
| **59.50 ERROR To continue turn off then on** | A main motor (M1) error has occurred. Motor operation is verified during device power-up. | 1. Turn the device off, and then turn the device on.<br>2. Verify that nothing is hindering the main motor. If necessary, remove all paper trays and the print cartridge, and then turn on the device and listen for motor operation.<br>3. Verify that the main motor is connected to connector J407 on the ECU. You might have to remove the main cooling fan to see this connection.<br>4. If the message persists, replace the motor (see Main motor on page 176). |
| **62 NO SYSTEM To continue turn off then on** | A problem exists with the device firmware. | 1. Turn the device off, and then turn the device on.<br>2. Go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp to check the latest firmware image version. If the latest firmware image version is newer than the one installed on the device, upgrade the device, if possible.<br>3. If the message persists, replace the formatter (see Formatter on page 135). |
| **64 ERROR To continue turn off then on** | A scan buffer error occurred. | 1. Turn the device off, and then turn the device on.<br>2. Go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp to check the latest firmware image version. If the latest firmware image version is newer than the one installed on the device, upgrade the device, if possible.<br>3. If the message persists, replace the formatter (see Formatter on page 135). |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **68.X Permanent storage full To continue touch OK**<br><br>**68.X Permanent storage write fail To continue touch OK** | The device NVRAM is full or the storage device is failing to write. Some settings saved in the NVRAM might have been reset to the factory defaults. Printing can continue, but some unexpected functions might occur if an error occurred in permanent storage.<br><br>**X description**<br><br>**0** onboard NVRAM<br><br>**1** disk drive | Touch OK to clear the message. If the message is not cleared, turn the device off, and then turn the device on.<br><br>**68.0, onboard NVRAM**<br><br>1. If the message persists, perform an NVRAM initialization (see Service mode functions on page 247). Make sure that you read and understand the caution and the note in that section.<br><br>2. If, after performing an NVRAM init, the message persists, replace the formatter (see Formatter on page 135).<br><br>**68.1, disk drive**<br><br>1. Use the HP Web Jetadmin software to delete files from the disk drive.<br><br>2. If, after deleting files from the disk drive, the message persists, reinitialize the disk drive (see Service mode functions on page 247). Make sure that you read and understand the caution and the note in that section.<br><br>3. If, after reinitializing the disk drive, the message persists, replace the disk drive (see Disk drive on page 132). |
| **68.X Storage error settings changed To continue touch OK** | One or more device settings in NVRAM are invalid and have been reset to the factory-default settings. Printing can continue, but some unexpected functions might occur if an error occurred in permanent storage. | 1. Touch OK to clear the message. If the message is not cleared, turn the device off, and then turn the device on.<br><br>2. Check the device settings to determine which settings have changed.<br><br>3. Perform an NVRAM initialization (see Service mode functions on page 247). Make sure that you read and understand the caution and the note in that section.<br><br>4. If, after performing an NVRAM initialization, the message persists, replace the formatter (see Formatter on page 135). |
| **79.XXXXX Error To continue turn off then on** | A critical formatter hardware error occurred. | 1. Turn the device off, and then turn the device on.<br><br>2. Upgrade the firmware.<br><br>3. If necessary, replace the formatter. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **8X.YYYY EIO ERROR To continue turn off then on** | The EIO accessory card has encountered a critical error, as specified by **YYYY**. | 1. Turn the device off, and then turn the device on.<br>2. Turn the device off, reinstall the EIO accessory, and then turn the device on.<br>3. Replace the EIO accessory. |
| **8X.YYYY EMBEDDED JETDIRECT ERROR To continue turn off then on** | The embedded HP Jetdirect print server has encountered a critical error, as specified by **YYYY**. | 1. Turn the device off, and then turn the device on.<br>2. Go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp to check the latest firmware image version. If the latest firmware image version is newer than the one installed on the device, upgrade the device, if possible.<br>3. If the message persists, replace the formatter (see Formatter on page 135). |
| **Action not currently available for Tray <X> Tray size cannot be any size/any custom** | A duplexed (2-sided) document was requested from a tray that is set to **Any size** or **Any custom**. Duplexing is not allowed from a tray configured to **Any size** or **Any custom**. | Select another tray or reconfigure the tray. |
| **Authentication Required** | Authentication has been enabled for this feature or destination. A user name and password are required. | Type the user name and password, or contact the network administrator. |
| **Authentication Required To Use This Feature** | A user name and password are required. | Type the user name and password, or contact the network administrator. |
| **Cannot duplex close rear bin** | The device cannot print on both sides of the page if the rear output bin is open. | Close the rear output bin. |
| **Check the glass and remove any paper To continue press Start** | A digital send or copy job has been performed from the scanner glass, but the original document needs to be removed. | Remove the original document from the scanner glass, and then press Start. |
| **Chosen personality not available To continue touch OK** | A print job requested a language (personality) that is not available for this device. The job will not print and will be cleared from memory. | Print the job by using a printer driver for a different printer language, or add the requested language to the device (if possible). To see a list of available personalities, print a configuration page. |
| **CLEANING DISK X% COMPLETE**<br>alternates with<br>**DO NOT POWER OFF** | The memory disk is being cleaned. This process might take up to an hour. During this time, no jobs can be printed. | Do not turn off the device. Wait for the process to complete.<br>The device automatically restarts at the end of the cleaning process. |
| **Close front door** | The front door is open. | Close the front door. If the message persists, make sure that the front-door microswitch is installed correctly and that it is operational. |
| **Digital send communication error** | The device is unable to connect to the Digital Sending Software. | Make sure that the Digital Sending Software is running and that the Digital Sending Software and the device are on the network. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **Document feeder cover open** | The document feeder (ADF) cover is open. | Close the document feeder (ADF) cover. Follow the instructions in the onscreen dialog box. |
| **Document feeder empty** | The document feeder (ADF) does not contain paper. | Load paper in the document feeder (ADF) input tray. |
| **Document feeder pick error** | The document feeder (ADF) experienced an error while picking media. | Make sure that your original contains no more than 50 pages. Follow the instructions in the onscreen dialog box.<br><br>If this message appears frequently, clean the ADF roller assembly (see the user guide). If, after cleaning the ADF roller assembly, the message persists, replace the ADF roller assembly. |
| **E-mail Gateway did not accept the job because the attachment was too large.** | The scanned documents have exceeded the size limit of the e-mail gateway. | Send the job again using a lower resolution, smaller file size setting, or fewer pages. See the user guide to learn how to reduce the size of the attachment. Contact the network administrator to enable sending the scanned documents by using multiple e-mails. |
| **E-mail Gateway did not respond. Job failed.** | A gateway has exceeded the time out value. | Validate the SMTP IP address. See the user guide. |
| **E-mail Gateway rejected the job because of the addressing information. Job failed.** | One or more of the e-mail addresses is incorrect. | Send the job again with the correct addresses. |
| **Error executing Digital Send job. Job failed.** | A digital send job has failed and cannot be delivered. | Try to send the job again. |
| **HP digital sending: delivery error** | A digital send job has failed and cannot be delivered. | Send the job again. |
| **Initializing scanner** | The device is initializing the scanner. | Wait for the control-panel display to show Ready. |
| **Install black cartridge** | The device detects the print cartridge by detecting a voltage differential within the cartridge. The photo-conductive drum connected to the high-voltage power supply provides the reference with which to measure the differential. | 1. Verify that a print cartridge is installed in the device.<br><br>2. Verify that the drum ground connector on the high-voltage power supply is correctly seated on the mechanical connector.<br><br>3. Verify that the cartridge mechanism functions correctly. When the cartridge is removed from the device, the mechanism swings outward, away from the chassis. When the cartridge is inserted into the device, the mechanism closes toward the chassis. |
| **Insufficient memory to load fonts/data <device> To continue touch OK** | The device does not have enough memory to load the data (for example, fonts or macros) from the location specified. | Touch OK to continue without this information. If the message persists, add more memory. |
| **Jam in document feeder** | Media is jammed in the document feeder (ADF). | Remove jammed media from the document feeder (ADF). Follow the instructions in the |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| | | onscreen dialog box, or see Clear jams from the ADF on page 238.<br><br>If the message persists after all jams have been cleared, a sensor might be stuck or broken. Check the sensors in the ADF. If a sensor is broken, replace the ADF assembly (see ADF assembly on page 100). |
| **Load Tray 1: <type>, <size>** | The tray is empty or configured for a different size than the size requested. | Follow the instructions in the onscreen dialog box. If the message persists, make sure that the tray 1 media-present sensor (PS902) is operational. |
| **Manually feed: <type>, <size>** | The specified job requires manual feed from tray 1. | Load the requested media into tray 1.<br><br>To override the message, touch OK to use a type and size of media that is available in another tray. |
| **Non HP supply installed Economode disabled** | A non-HP supply or a refilled HP supply has been installed. | Follow the instructions in the onscreen dialog box. |
| **Order black cartridge** | The number of pages remaining for the print cartridge has reached the low threshold. The device was set to stop printing when a supply needs to be ordered. | Touch OK to continue printing until the print cartridge is out of toner. |
| **Output bin <X> full** | The specified output bin is full, and printing cannot continue. | Empty the bin to continue printing. |
| **Password or name is incorrect. Please enter correct login.** | The user name or password was typed incorrectly. | Retype the user name and password. |
| **PIN is incorrect. Please re-enter PIN.** | The PIN was typed incorrectly. | Retype the PIN. |
| **Please turn device off and install hard disk.** | The requested job requires a hard disk, but the device does not have a hard disk installed. | Turn the device off and install a hard disk. |
| **Replace black cartridge** | The print cartridge is out of toner.<br><br>**NOTE:** Depending on how the device is configured, this message might appear when it is time to order a new print cartridge. In this case, the message indicates that you can touch **OK** to continue printing. | Replace the print cartridge. |
| **Sanitizing disk <X>% complete Do not power off** | The hard disk is being cleaned. | Contact the network administrator. |
| **Scan failure Press Start to rescan** | The scan was unsuccessful and the document needs to be rescanned. | If necessary, reposition the document to rescan it, and then press Start. |
| **SMTP gateway not responding** | The SMTP gateway has exceeded a time out value. | Verify the e-mail server address. See the user guide. Contact the network administrator. |
| **The digital sending service at <IP Address> does not service this MFP. Contact administrator.** | The device cannot communicate with the specified IP address. | Verify the IP address. Contact the network administrator. |

**Table 6-1 Control-panel messages (continued)**

| Control panel message | Description | Recommended action |
|---|---|---|
| **The digital sending service must be upgraded to support this version of the MFP firmware. Contact administrator.** | The digital sending service is not supported by the device firmware version that is currently installed. | Check the firmware version. Contact the network administrator. |
| **The folder you have entered is not a valid folder.** | The folder name was entered incorrectly, or the folder does not exist. | Re-enter the folder name correctly, or add the folder. |
| **Tray XX Open or Empty** | The tray indicated is either open or empty. | Load or close the tray. Printing can continue from another tray. |
| **Unable to connect** | A network connection is not detected. | Verify the network connection. Contact the network administrator. |
| **Unable to copy** | The device was unable to copy the document. If this message persists, contact an HP-authorized service or support provider. (See the HP support flyer, or go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp.) | To temporarily hide this message in order to fax or send to e-mail, touch Hide. |
| **Unable to send** | A network connection is not detected. | Verify the network connection. Contact the network administrator. |
| **Unable to send fax. Please check fax configuration.** | The device is unable to send a fax job. | Contact the network administrator. Also see the *HP LaserJet Analog Fax Accessory 300 User Guide* for additional configuration and troubleshooting information. |
| **Unable to store job** | The device is unable to store a job. | To temporarily hide this message in order to fax or send to e-mail, touch Hide. If this message persists, replace the disk drive (see Disk drive on page 132). |
| **User name or password is incorrect. Please re-enter.** | The user name or password was typed incorrectly. | Retype the user name and password. |
| **User name, job name, or PIN is missing.** | One or more of the required items has not been selected or typed. | Select the correct user name and job name, and type the correct PIN. |

# Clear jams

When clearing jams, be very careful not to tear the media. If a small piece of media remains in the device, it could cause additional jams.

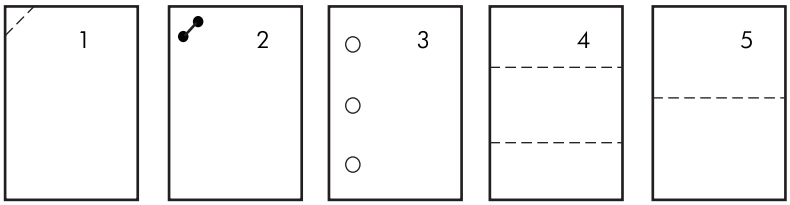
## Common causes of jams

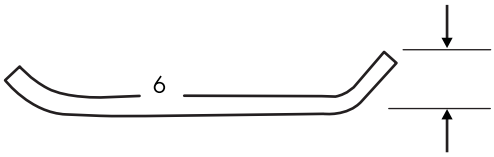
**The device is jammed.**[1]

| Cause | Solution |
|---|---|
| The media does not meet specifications. | Use only media that meets HP specifications. |
| A component is installed incorrectly. | Verify that the print cartridge is correctly installed. |
| You are using media that has already passed through a device or copier. | Do not use media that has been previously printed on or copied. |
| An input tray is loaded incorrectly. | Remove any excess media from the input tray. Make sure that the stack is below the maximum stack height mark in the tray. |
| The media is skewed. | The input-tray guides are not adjusted correctly. Adjust them so they hold the stack firmly in place without bending it. |
| The media is binding or sticking together. | Remove the media, flex it, rotate it 180°, or flip it over. Reload the media into the input tray. |
| The media is removed before it settles into the output bin. | Reset the device. Wait until the page completely settles in the output bin before removing it. |
| During two-sided printing, you removed the paper before the second side of the document was printed. | Reset the device and print the document again. Wait until the page completely settles in the output bin before removing it. |
| The media is in poor condition. | Replace the media. |
| The internal tray rollers are not picking up the media. | If the media is heavier than 120 g/m$^2$ (32 lb), it might not be picked from the tray. |
| The media has rough or jagged edges. | Replace the media. |
| The media is perforated or embossed. | Perforated or embossed media does not separate easily. Feed single sheets from tray 1. |
| Device supply items have reached the end of their useful life. | Check the device control panel for messages prompting you to replace supplies, or print a supplies status page to verify the remaining life of the supplies. |
| Paper was not stored correctly. | Replace the paper in the trays. Paper should be stored in the original packaging in a controlled environment. |
| Not all device packing material was removed. | Verify that the packing tape, cardboard, and plastic shipping locks have been removed from the device. |

[1] If the device still continues to jam, contact HP Customer Support or your authorized HP service provider.

The majority of document-feeder jams can be attributed to the condition of the “used” original documents. The following conditions can contribute to excessive document-feeder jams:



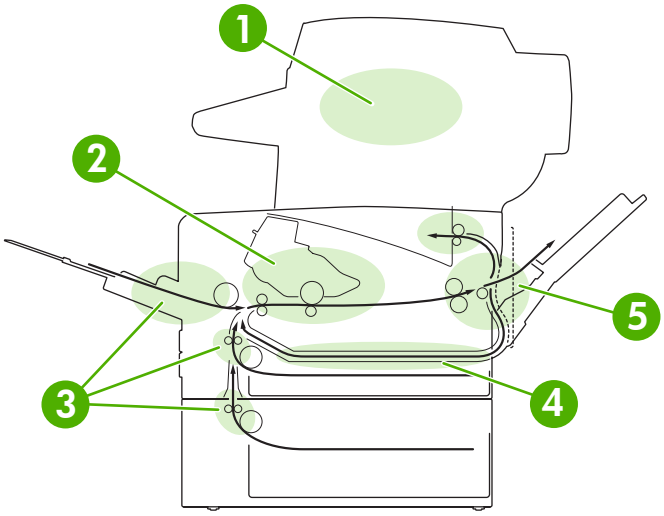




| | |
|---|---|
| 1 | Dog ear (fold in corner) |
| 2 | Staple(s) removed |
| 3 | Three hole |
| 4 | Trifold |
| 5 | Bifold |
| 6 | Excessive curl (H > 10mm) |

**NOTE:** For the types of originals listed in the preceding table, use the flatbed scanner instead of the document feeder.

## Jam locations

Use this illustration to locate media jams in the device. For instructions about clearing jams, see the section listed for each jam location.

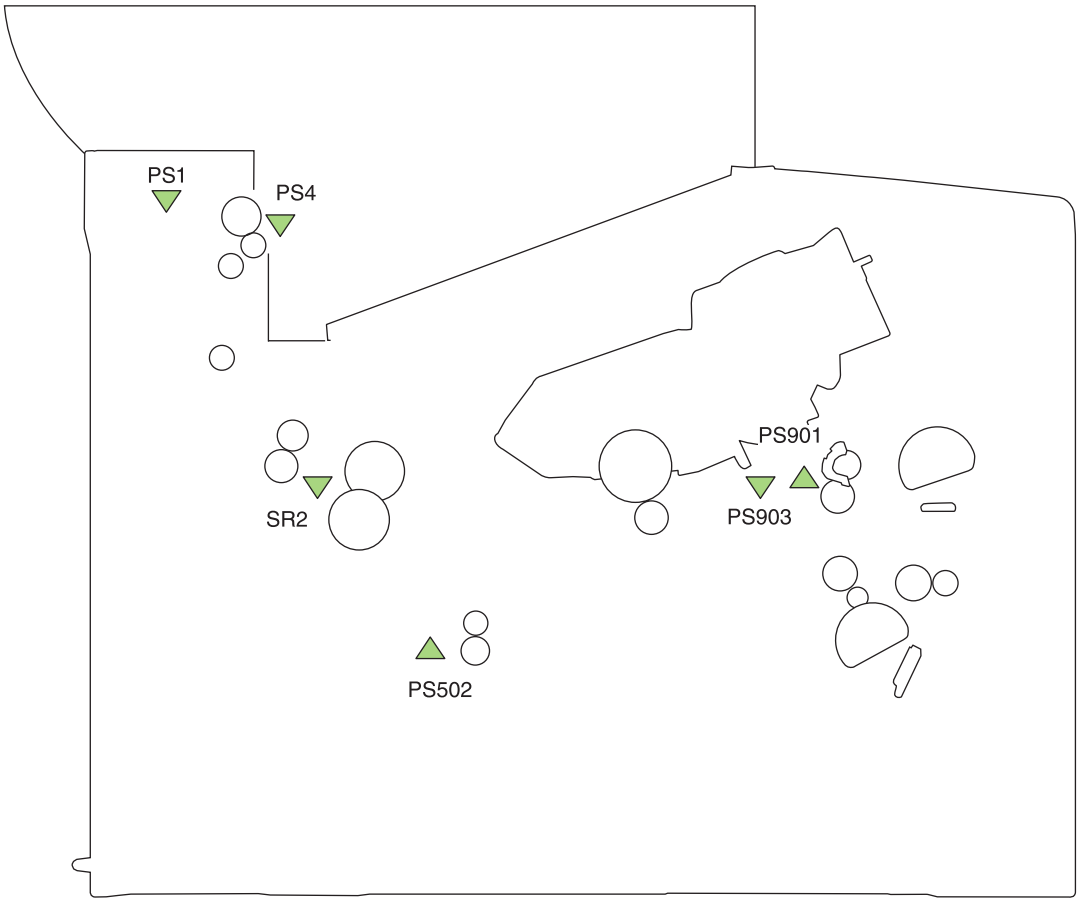



| | | |
|---|---|---|
| 1 | Automatic document feeder (ADF) | See Clear jams from the ADF on page 238.<br><br>**NOTE:** If documents jam frequently in the ADF, make sure that the ADF input tray is installed correctly (see Figure 5-5 Reinstalling the ADF input tray on page 102). ADF jams and skew can result from incorrect reinstallation. |
| 2 | Print cartridge | See Clear jams from the print-cartridge area on page 240. |
| 3 | Input trays | See Clear jams from the input-tray areas on page 241. |
| 4 | Duplex path (for two-sided printing) | See Clear jams from the duplexer on page 243. |
| 5 | Output bins | See Clear jams from the output-bin areas on page 244. |

## Jam detection

The device contains five sensors that verify whether or not media is transported smoothly through the device. Figure 6-2 Jam-detection sensors on page 237 shows the sensors.

**Figure 6-2** Jam-detection sensors




| | | | |
|---|---|---|---|
| PS901 | Top-of-page sensor | SR2 | Delivery sensor |
| PS903 | Media-width sensor | PS4 | Output-bin-full sensor |
| PS502 | Duplex sensor | PS1 | Face-up cover sensor |

The CPU on the ECU identifies jams by checking whether media is present during the printing process against media-transport timing, which is stored in memory. When the CPU determines that a jam has occurred, it stops the printing operation and sends a signal to the formatter so that the touchscreen can show an error message.

The CPU determines a **residual-media jam** if one or more of the sensors PS901, SR2, PS502, or PS903 detects that media is present after power-on or when an open door (for example, the cartridge door) is shut.

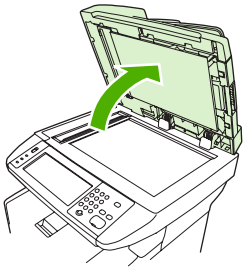
The CPU determines a **delivery-delay jam** if PS4 does not detect the leading edge of the media within a specified time after PS901 detects the leading edge.

The CPU determines the delivery output paper path based on the status of PS1. When the rear door is closed, the output paper path is face down and duplexing is allowed; otherwise, paper is delivered

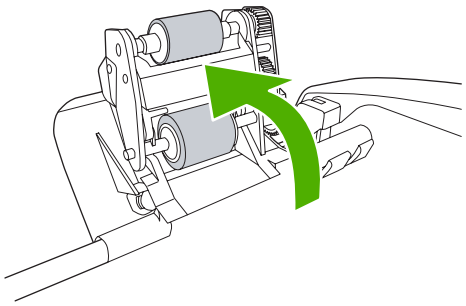
face up. Malfunction of this sensor might create a delivery-delay jam triggered by PS4 based on the status of the rear door (either open or closed). When PS1 is faulty, the CPU is not able to determine the physical state of the rear door.

## Clear jams from the ADF

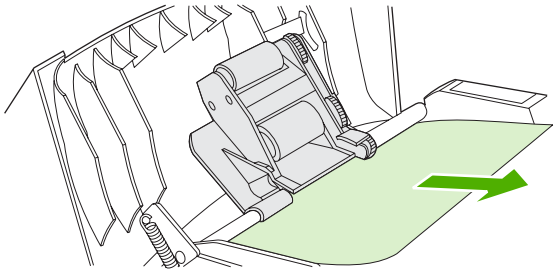
1. Open the ADF cover.



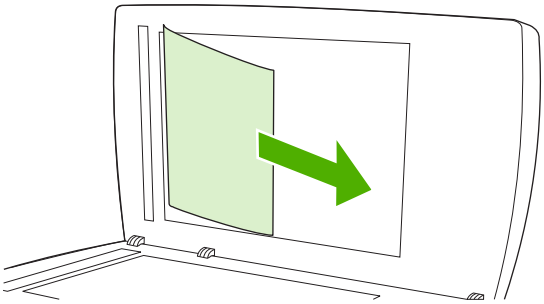
2. Lifting the green lever, rotate the pick mechanism until it stays open.



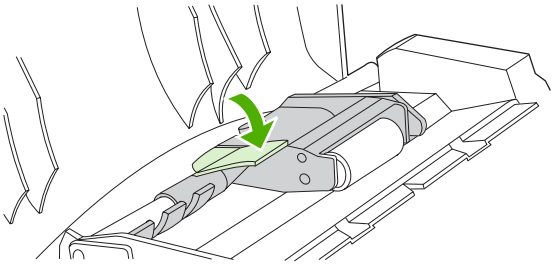
3. Gently try to remove the page without tearing it. If you feel resistance, go to the next step.



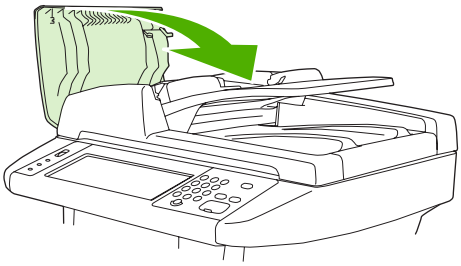
4. Open the scanner lid and gently loosen the media by using both hands. When the media is free, gently pull it out in the direction shown.



5. Close the scanner lid, and then lower the roller assembly.



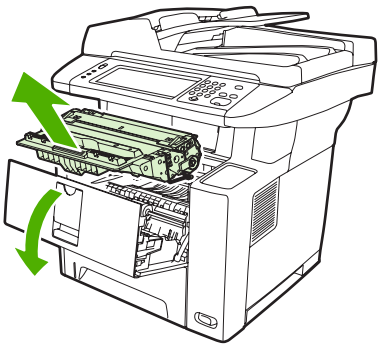
6. Close the ADF lid.



7. If any media is visible in the output bin area, gently pull it out.

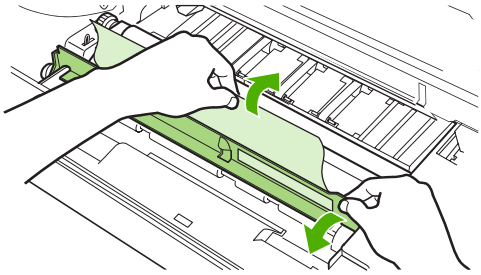
## Clear jams from the print-cartridge area

1. Open the front door and remove the print cartridge.



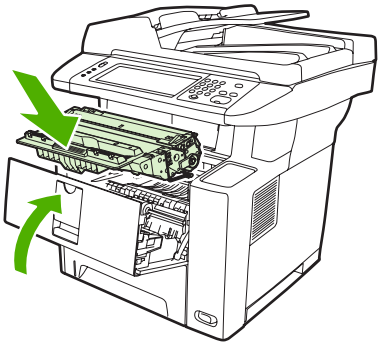
△ **CAUTION:** To prevent damage to the print cartridge, do not expose it to light for more than a few minutes.

2. Open the plate, and then slowly pull the media out of the device. Be careful to not tear the media.



△ **CAUTION:** Avoid spilling loose toner. Use a dry, lint-free cloth, to clean any toner that might have fallen into the device. If loose toner falls into the device, it might cause temporary problems with print quality. Loose toner should clear from the paper path after a few pages are printed. If toner gets on your clothing, wipe it off with a dry cloth and wash clothing in cold water. (Hot water sets toner into fabric.)

3. Replace the print cartridge, and then close the front door.

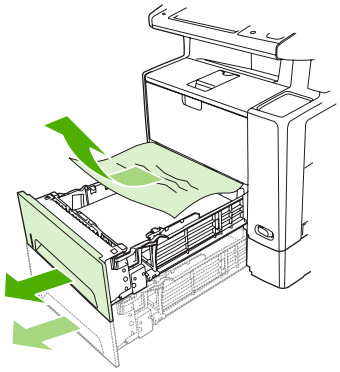


If a jam message persists, there is still media in the device. Look for media in other locations.

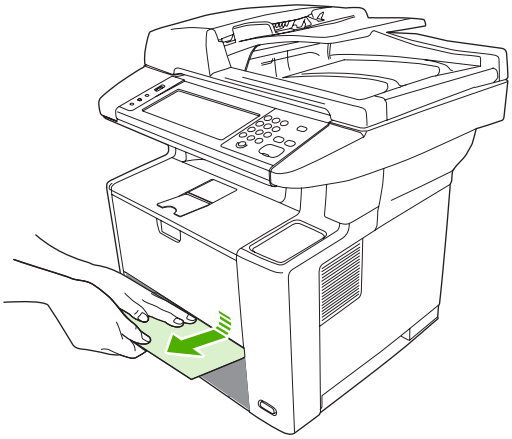
## Clear jams from the input-tray areas

**NOTE:** To remove media from the tray 1 area, slowly pull the media out of the device. For all other trays, complete the following procedure.

1. Slide the tray out of the device, and remove any damaged paper from the tray.

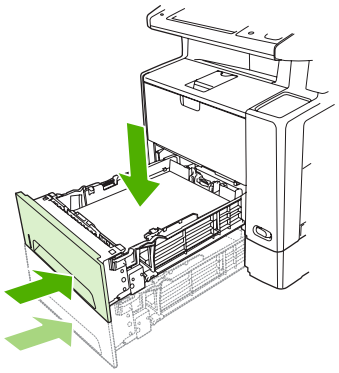


2. If the edge of the paper is visible in the feed area, slowly pull the paper down and out of the device. If the paper is not visible, look in the front door area.



**NOTE:** Do not force the paper if it will not move easily. If the paper is stuck in a tray, try removing it through the tray above (if applicable) or through the front door area.

3. Before replacing the tray, make sure the paper is flat in the tray at all four corners and below the tabs on the guides.

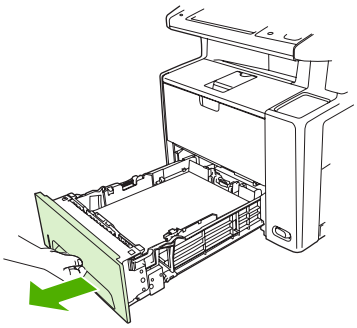


4. Open and close the front door, and then touch OK on the touchscreen to clear the jam message.

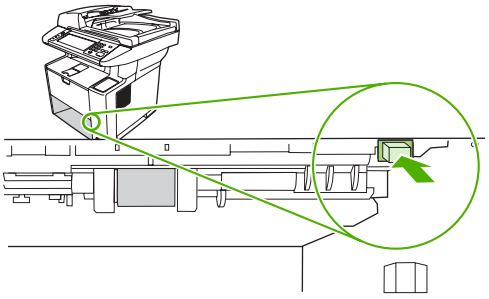
If a jam message persists, there is still media in the device. Look for media in other locations.

## Clear jams from the duplexer

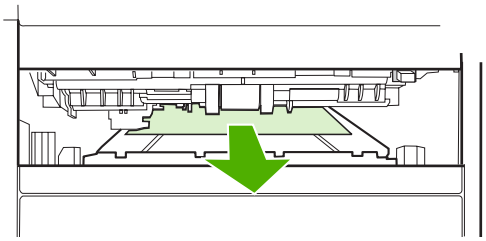
1. Remove tray 2 from the device.



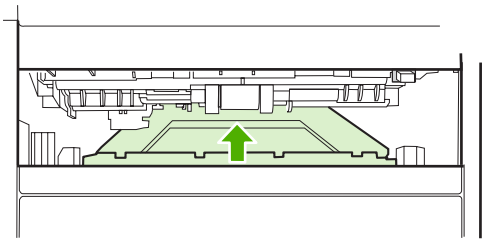
2. Push the green button on the top right front of the tray 2 opening to access the duplex paper path.



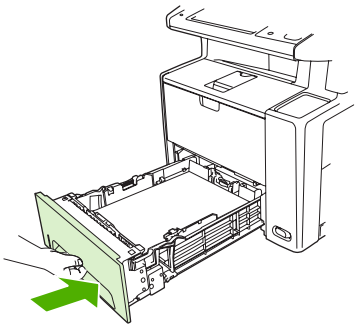
3. Reach in and pull out the jammed paper.



4. Push the bottom of the duplex access plate back up until it clicks into place on both sides (both sides need to be engaged).



5. Reinstall tray 2.



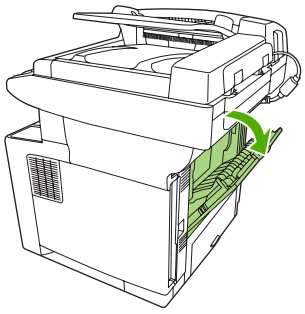
6. Open and close the front door, and then touch OK on the touchscreen to clear the jam message.

If a jam message persists, there is still media in the device. Look for media in other locations.

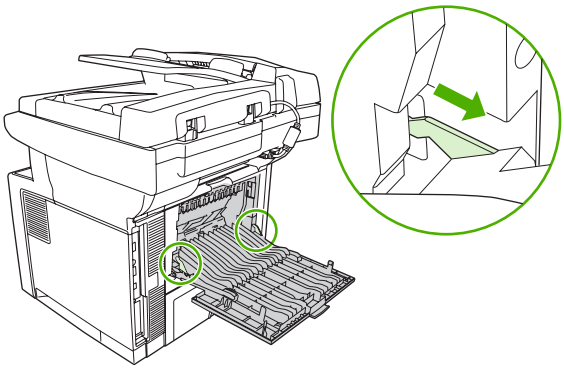
## Clear jams from the output-bin areas

**NOTE:** If media is jammed in the top output area, but most of the media is still inside the device, it is best to remove it through the rear door.

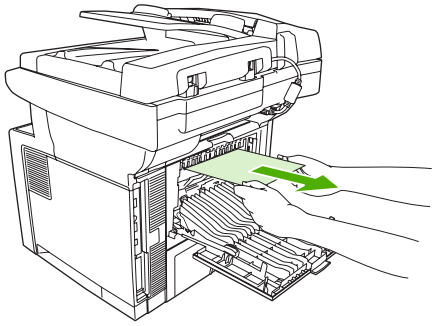
1. Open the rear output bin.



2. Push down on the bin door to unclip the door stops, and then let the door drop open.

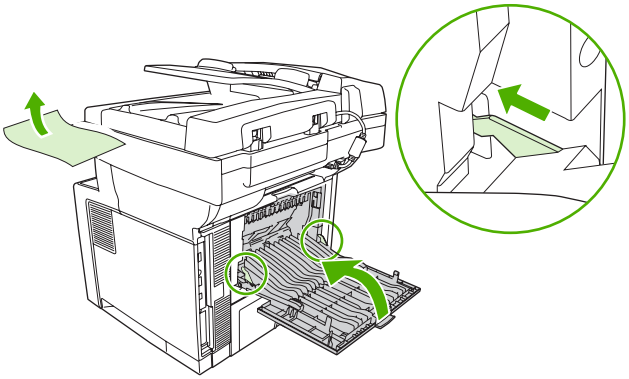


3. Grasp both sides of the media, and slowly pull the media out of the device. (There might be loose toner on the media. Be careful not to spill it on yourself or into the device.)



**NOTE:** If media is difficult to remove, try opening the front door and removing the print cartridge to release pressure on the media.

4. Close the rear bin.



5. Open and close the front door, and then touch OK on the touchscreen to clear the jam message.

If a jam message persists, there is still media in the device. Look for media in other locations.

# Interface troubleshooting

## Communications checks

**NOTE:** Communication problems are normally the customer's responsibility. Time spent attempting to resolve these problems might not be covered by the Hewlett-Packard product warranty. Refer the customer to the network administrator for assistance in troubleshooting network problems.

## LAN hardware test

1. To perform a LAN hardware test, touch Administration.
2. Touch Initial Setup.
3. Touch Networking and I/O.
4. Touch Embedded Jetdirect.
5. Touch Diagnostics.
6. Touch LAN HW Test.
7. Touch Yes to run the test.

If the test fails, replace the formatter (see Formatter on page 135).

**NOTE:** For a complete list of Jetdirect menus, see the user guide.

# Service mode functions

## Boot-up key sequences

Use boot-up key sequences to accomplish the following service functions:

- **Select language.**
- **Cold reset.** A cold reset unlocks menus that have been previously locked and sets all control panel menu items (including EIO settings) back to the factory defaults. However, it *does not* clear the values in the **SERVICE** menu (such as the serial number and page counts).

**NOTE:** Before performing a cold reset, print a configuration page. Use the information on the configuration page to reset any customer-set device configuration values that the cold reset procedure changes.

- **Embedded LAN enable.**
- **Embedded LAN disable.**
- **Initialize disks.**

**CAUTION:** A hard-disk initialization erases and reformats the device hard disk. Perform a hard-disk initialization only if an error code on the control panel indicates a disk error. Always try initializing the hard disk before replacing it.

**NOTE:** Before performing a hard-disk initialization, print a configuration page. Use the information on the configuration page to reset any customer-set device configuration values that the hard-disk initialization procedure changes.

- **Skip disk-load.** When the power is turned on the device begins the power-on sequence. By performing a skip disk-load, you can cause the device to resume the power-on sequence but not to recognize the hard disk. This can be helpful in isolating hard-disk errors.
- **NVRAM init.**

**CAUTION:** Initializing the NVRAM resets the event log, the page counts, and embedded EIO and resets service menu values to factory defaults. NVRAM initialization does *not* reset the model number, serial number, service ID (born-on date), usage data, or the error log.

Use the service menu to restore the page counts. Also reconfigure any computers that print to this device so that the computers can recognize the device. Initialize the NVRAM only when absolutely necessary. In most situations, use a cold reset rather than a NVRAM initialization to reset device settings and retain the values in the service menu.

**NOTE:** Before performing a NVRAM initialization, print a configuration page. Use the information on the configuration page to reset any customer-set device configuration values that the NVRAM initialization procedure changes. Take special note of the *total page count* and *maintenance count*.

- **Skip calibration.**

## Low-level boot-up key sequence for selecting a language, performing a cold reset, and enabling and disabling embedded LAN

1. Turn off the device.
2. Turn on the device.
3. When the control-panel display shows that the device has begun to count the memory, press and hold the 6 key.
4. When the LED lights turn on, release the 6 key.
5. Use the 3 and 9 keys to scroll through the options (select language, cold reset, embedded LAN enable, and embedded LAN disable) and then press the 6 key to select the option you want.

The device continues the power-on sequence.

## Medium-level boot-up key sequence for initializing disks

1. Turn off the device.
2. Turn on the device.
3. When the control-panel display shows that the device has begun to count the memory, press and hold the Start key.
4. When the LED lights turn on, release the Start key.

**NOTE:** Initialize disks is the only option available when using the medium-level boot-up key sequence.

5. Press the 6 key to select Initialize disks.

The device continues the power-on sequence.

## High-level boot-up key sequence for NVRAM initialization and skipping disk-load and calibration

1. Turn off the device.
2. Turn on the device.
3. When the control-panel display shows that the device has begun to count the memory, press and hold the 9 key.
4. When the LED lights turn on, release the 9 key.
5. Press the 3 key, and then press the Start key.
6. Use the 3 and 9 keys to scroll through the options (skip disk-load, NVRAM init and skip calibration) and then press the 6 key to select the option you want.

The device continues the power-on sequence.

## Service menu

Authorized HP service technicians can use this menu to gain access to device settings that are reserved for service personnel. The **SERVICE** menu is protected by use of a personal identification number (PIN). When you select **SERVICE** from the list of menus, you are prompted to type an eight-digit PIN code.

**NOTE:** The device automatically exits the **SERVICE** menu after about one minute if no menu items are selected or changed.

1. Touch Administration.
2. Touch Service.
3. Enter the service PIN code and then touch OK. Use the PIN code 11303506 for the HP LaserJet M3027/M3035 Series MFP.
4. Use the control panel to select the menu item you want.

- **Clear event log**. Select this item to clear (reset to zero) the internal event log.
- **Total page count**. Select this item to set the total number of pages that have been printed to-date. Typically this is only required when a new formatter is installed.
- **Serial number**. Select this item to update the serial number if you replace the formatter.
- **Service ID**. Select this item to specify the date when the device was first used, rather than the date when a replacement formatter is installed. See Service ID on page 250.
- **Cold reset**. Select this item to reset the default paper size when you replace the formatter or restore factory settings (see Boot-up key sequences on page 247). When you replace a formatter or restore factory settings in a country/region that uses A4 as the standard paper size, use this item to reset the default paper size to A4. Letter and A4 are the only cold-reset values available.

## Service ID

This information appears on the configuration page, which eliminates the need for customers to keep paper receipts for proof of the warranty. Because the device does not have an internal clock, the availability of the service ID date depends on the device being connected to a source that can provide the date, in this case a time server on the same network as the device. When the device is not connected to a date source, the service ID is not available, and **00000** appears on the configuration page.

### Restore the service ID

If you replace the formatter, the service ID is lost. Use this menu item to reset the value to the date that the device was first used. The date format is YYDDD. Use the following procedure to calculate the date.

1. To calculate YY, subtract 1990 from the calendar year. For instance, if the device was first used in 2002, calculate YY as follows: 2002 - 1990 = 12 (YY = 12).
2. To calculate DDD, use the following formula: 30 (calendar month - 1) + calendar day = DDD. If the calendar day is 31, use 30 instead. For instance, if the printer was first used on October 17, calculate DDD as follows:
   a. Subtract 1 from 10 (October is the tenth month of the year): 10 - 1 = 9.
   b. Multiply 9 by 30: 9 x 30 = 270.
   c. Add 17 to 270: 270 + 17 = 287 (DDD = 287).

### Convert the service ID to an actual date

You can use the device service ID number to determine whether the device is still under warranty. Use the following procedure to convert the service ID into the installation date.

1. Add 1990 to YY to determine the actual year that the device was installed.
2. Divide DDD by 30 and add 1 to the remainder. The total is the month.
3. The remainder from the calculation in step 2 is the day of the month.

Using the Service ID 12287 as an example, the date conversion is as follows:

- 12 + 1990 = 2002, so the year is 2002.
- 287 divided by 30 = 9 with a remainder of 17. Add 1 to 9 to get 10 so the month is October.
- The remainder (from the above calculation) is 17, so that is the day of the month.
- The complete date is 17-October-2002.

A six-day grace period is built into the date system.

# Troubleshooting tools

## Control-panel menus

Touch Administration to open the control-panel menus. Use the scroll bar on the control panel to scroll through the menus. Touching a menu item opens the menu. The high-level menus appear in the following order:

| | |
|---|---|
| Main menus | Information menu |
| | Default Job Options menu |
| | Time/Scheduling menu |
| | Management menu |
| | Initial Setup menu |
| | Device Behavior menu |
| | Print Quality menu |
| | Troubleshooting menu |
| | Resets menu |
| | Service menu |

## Print Quality menu

Use the Optimize submenu of the Print Quality menu to troubleshoot print-quality issues.

**Table 6-2 Print Quality menu**

| Menu item | Sub-menu item | Values | Description |
|---|---|---|---|
| Optimize | High Transfer | Normal (default)<br>Increased | Set High Transfer to Increased if parts of the printed image appear to have extra toner. |
| | More Separation | Off (default)<br>On | Set More Separation to On if media repeatedly jams in the print cartridge when printing single-sided print jobs.<br>**NOTE:** When More Separation is set to On, a print defect across the width of the page near the leading edge might be noticeable. |
| | Line Detail | Off (default)<br>On | Set Line Detail to On if printed lines and text are blurred. |
| | Restore Optimize | Restore (button) | Reset all the Optimize parameters to the factory default settings. |

## Troubleshooting menu

Administrators can use this menu to isolate parts and to troubleshoot jam and print-quality issues.

The following section lists the settings and their possible values in the **Troubleshooting** menu.

**Table 6-3 Troubleshooting menu**

| Menu item | Sub-menu item | Values | Description |
|---|---|---|---|
| Event Log | | Print (button) | Use this feature to show the 50 most recent events in the event log.<br><br>Touch Print to print the full event log. |
| Calibrate Scanner | | Calibrate | Use this feature to compensate for offsets in the scanner imaging system (carriage head) for ADF and flatbed scans.<br><br>You might need to calibrate the scanner if it is not capturing the correct sections of scanned documents. |
| Fax T.30 Trace | T.30 Report | | Use this feature to print or configure the fax T.30 trace report. T.30 is the standard that specifies handshaking, protocols, and error correction between fax machines. |
| | When to Print Report | Never auto print<br><br>Print after any fax job<br><br>Print after fax send jobs<br><br>Print after any fax error<br><br>Print after send errors only<br><br>Print after receive errors only | |
| Fax Transmit Signal Loss | | A value between 0 and 30. | Use this feature to set loss levels to compensate for phone line signal loss. You should not modify this setting unless requested to do so by an HP service representative because it could cause the fax to stop functioning. |
| Fax V.34 | | Normal (default)<br><br>Off | Use this feature to disable V.34 modulations if several fax failures have occurred or if phone line conditions require it. |
| Fax Speaker Mode | | Normal (default)<br><br>Diagnostic | This feature is used by a service technician to evaluate and diagnose fax issues by listening to the sounds of fax modulations. |

**Table 6-3 Troubleshooting menu (continued)**

| Menu item | Sub-menu item | Values | Description |
|---|---|---|---|
| Paper Path Test | Test Page | Print (button) | Generate a test page for testing paper handling features. You can define the path that is used for the test in order to test specific paper paths. |
| | Source | All trays<br>Tray 1<br>Tray 2<br>(Additional trays are shown, if applicable.) | Specify whether the test page will be printed from all trays or from a specific tray. |
| | Duplex | Off (default)<br>On | Select whether the duplexer should be included in the Paper Path test. |
| | Copies | 1 (default)<br>10<br>50<br>100<br>500 | Select how many pages should be sent from the specified source as part of the Paper Path test. |
| Scanner Tests | | | This menu item is used by a service technician to diagnose potential problems with the device scanner. |
| Control Panel | LEDs | | Use this feature to make sure the components of the control panel are functioning correctly. |
| | Display | | |
| | Buttons | | |
| | Touchscreen | | |

# Test pages

Printing test pages helps you determine whether or not the device engine and the formatter are functioning.

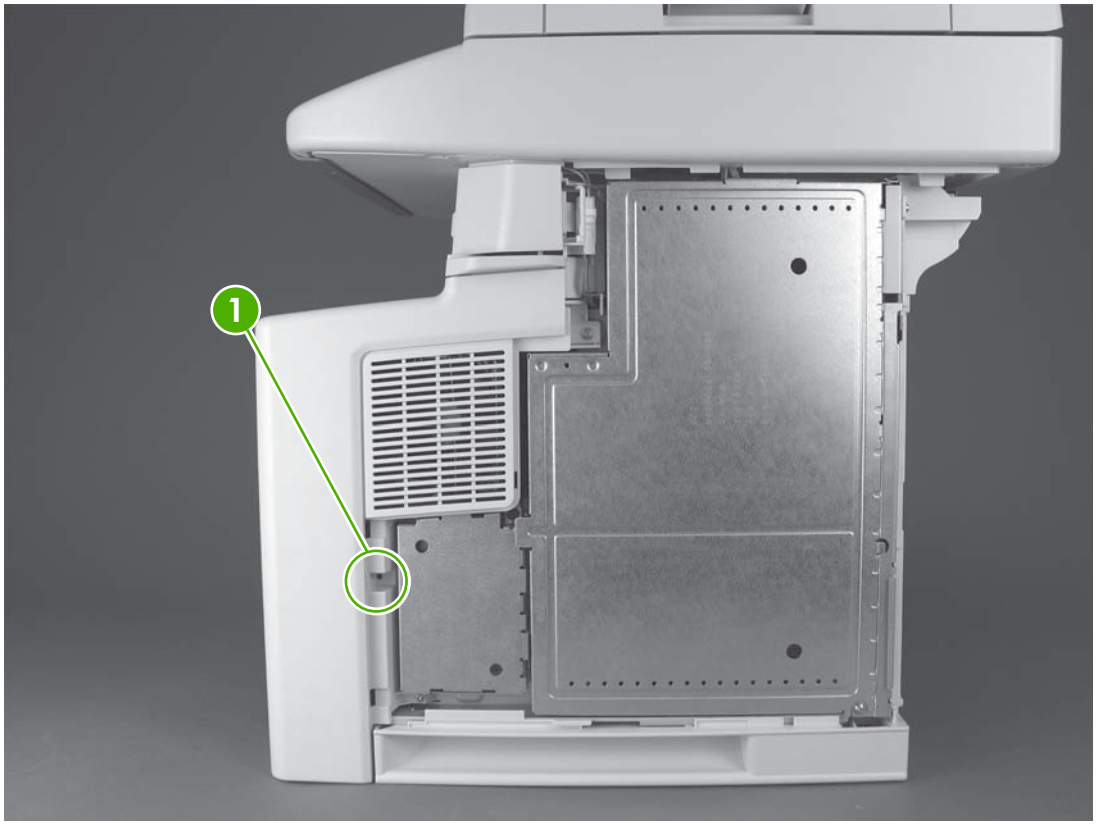
**NOTE:** Information pages also can be used to solve device issues.

## Engine-test page

To verify that the device engine is functioning, print an engine-test page. The purpose of the engine test is mainly to isolate the formatter and test the internal components such as paper path, sensors, EP processes, and fuser. This test will not check communication between the formatter and the DC controller and the formatter and the network connection. If the engine test is successful, the problem might be in the formatter, the control panel, or the cable that connects them.

To print an engine-test page, press the engine-test-page switch (callout 1).

**Figure 6-3** Locating the engine-test-page switch




The test page should have a series of horizontal lines. The lines will not go from edge to edge as they do on the engine-test page of other products. The test page prints from the last tray that the device pulled from, unless the device has been turned off and then turned on again since the most recent print job. If the device has been turned off and then on again since the most recent print job, then the page will print from tray 2. The device will continuously print test pages until the test-page switch is released. The device will not print a test page if it is in Sleep mode.

**Figure 6-4** Engine-test page

### Formatter test page

To verify that the formatter is functioning, print a configuration page.

## Embedded Web server

When the device is connected to the network, the embedded Web server is automatically available.

Use the embedded Web server to view device and network status and to manage printing functions from your computer instead of from the device control panel. The following are examples of what you can do through the embedded Web server:

- View device status information
- Specify the type of media that is loaded in each tray
- Determine the remaining life for all supplies and order new supplies
- View and change tray configurations
- View and change the device control panel menu configurations
- View and print internal pages
- Receive notification of device and supplies events
- View and change the network configuration

To use the embedded Web server, you must have Microsoft Internet Explorer 4 or later, or Netscape Navigator 4 or later. The embedded Web server works when the device is connected to an IP-based network. The embedded Web server does not support IPX-based device connections. You do not have to have Internet access to open and use the embedded Web server.

## Gaining access to the embedded Web server

In a supported Web browser on your computer, type the IP address for the device. (To find the IP address, print a configuration page.)

**NOTE:** After you navigate to the URL, you can bookmark it so that you can return to it quickly in the future.

The embedded Web server has three tabs that contain settings for and information about the device: the **Information** tab, the **Settings** tab, and the **Network** tab. Click the tab that you want to view. See the following sections for more information about each tab.

### Information tab

The **Information** tab contains the following pages.

- **Device Status**. Shows the device status and the life that remains in HP supplies (0% indicates that a supply is empty). This page also shows the type and size of print media that is set for each tray. To change the default settings, click **Change Settings**.
- **Configuration page**. Shows the information that is contained on the device configuration page.
- **Supplies Status**. Shows the life that remains in HP supplies (0% represents that a supply is empty). This page also provides supplies part numbers. To order new supplies, click **Order Supplies** in the **Other Links** area on the left side of the window. To visit this or any Web site, you must have Internet access.
- **Event log**. Shows a list of all device events and errors.
- **Usage page**. Shows a summary of the number of pages the device has printed, grouped by size and type (this page is only available if an optional hard disk is installed).
- **Device Information**. Shows the device network name, address, and model information. To change these entries, click **Device Information** on the **Settings** tab.

### Settings tab

Use the **Settings** tab to configure the device from your computer. The **Settings** tab can be password protected. If the device is on a network, always consult with the network administrator before changing settings on this tab.

The **Settings** tab contains the following pages.

- **Configure Device**. Use this page to configure all of the device settings. This page contains the traditional device menus: **Information**, **Paper Handling**, **Configure Device**, and **Diagnostics**.
- **Alerts**. (On networks only.) Use this page to establish e-mail alerts for various device and supplies events.
- **E-mail**. (On networks only.) Use this page in conjunction with the Alerts page to set up incoming and outgoing e-mail, as well as to establish e-mail alerts.
- **Security**. Use this page to set a password that must be typed to gain access to the **Settings** and **Networking** tabs. Also use it to enable and disable certain features of the embedded Web server.
- **Other Links**. Use this page to add or customize a link to another Web site. The link you establish appears in the **Other Links** area on all embedded Web server pages. The following

permanent links always appear in the **Other Links** area: **HP Instant Support**, **Order Supplies**, and **Product Support**.

- **Device Information**. Use this page to name the device and assign an asset number to it. Use the name and e-mail address for the primary contact who will receive information about the device.
- **Language**. Use this page to specify the language in which the embedded Web server information appears.

### Networking tab

The network administrator uses this tab to control network-related settings for the device when it is connected to an IP-based network. This tab does not appear if the device is directly connected to a computer, or if the device is connected to a network with anything other than an HP Jetdirect print server.

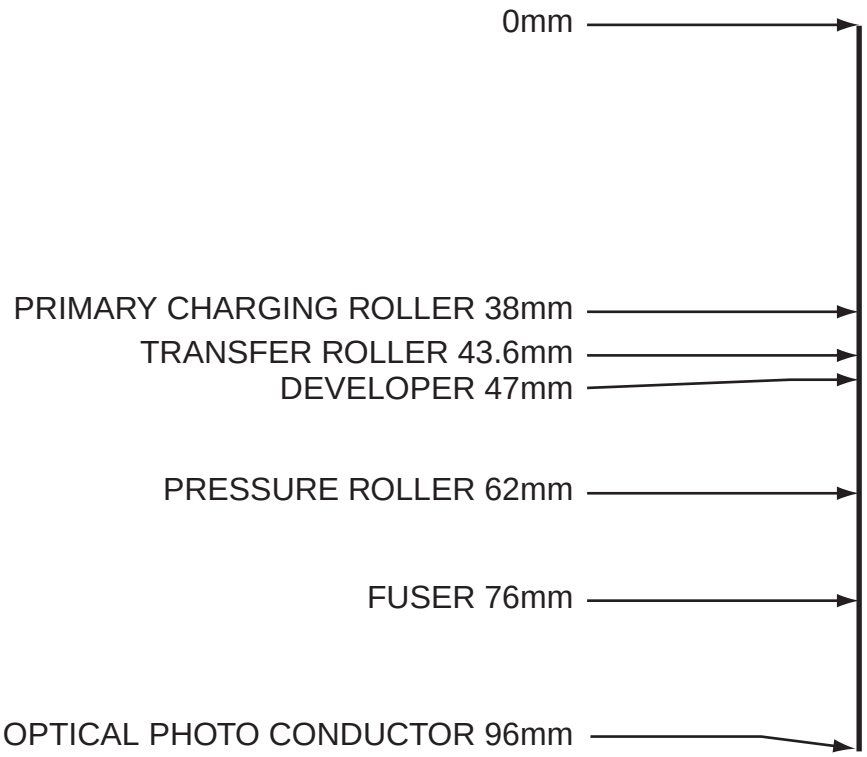
### Other links

This section of the embedded Web server contains links that connect you to the Internet. You must have Internet access in order to use any of these links. If you use a dial-up connection and did not connect when you first opened the embedded Web server, you must connect before you can visit these Web sites. Connecting to the Internet might require that you close your Web browser and reopen it.

- **HP Instant Support** connects to the HP Web site to help you find solutions. This service analyzes your device error log and configuration information to provide diagnostic and support information that is specific to your device.
- **Order Supplies** connects to the HP Web site so that you can order genuine HP supplies, such as print cartridges and paper.
- **Product Support** connects to the support site for the device, where you can search for help.

## Image defect ruler

Use a ruler to measure occurrences of repetitive image defects to help solve image quality problems. Place the ruler next to the first occurrence of the defect on the page. Find the distance between identical defects and use the figure below to identify the component that is causing the defect.



# Firmware updates and recovery

The device uses a flash-memory-based formatter that enables the firmware code to be updated when updated firmware is available. Flash memory also provides a method for product recovery if the installed firmware becomes corrupted or fails.

The device has remote firmware update (RFU) capability. Use the information in this section to upgrade the firmware. The overall process involves the following steps:

1. Determine the current level of firmware that is installed on the device.
2. Go to the HP Web site and find out whether a firmware update is available. If an update is available, download the latest firmware to your computer.
3. Transfer the new firmware from your computer to the device.

**NOTE:** If after attempting to update the firmware code the device does not return to the **Ready** state, perform the following procedures:

Try the firmware update again.

Perform the NVRAM init procedure. See Service mode functions on page 247.

If the device still does not reach the **Ready** state, replace the formatter. See Formatter on page 135.

## Determine the current level of firmware

The current level of firmware is shown on the configuration page. To print a configuration page, touch Administration, touch Configuration/Status Pages, touch Configuration Page, and then touch Print.

The firmware datecode is listed in the section called **Device Information**. The firmware datecode has this format: YYYYMMDD XX.XXX.X. The first string of numbers is the date, where YYYY represents the year, MM represents the month, and DD represents the date. For example, a firmware datecode of that begins with `20040225` represents February 25, 2004.

## Download the new firmware from the HP Web site

To find the most recent firmware upgrade for the device, go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp. This page provides instructions for downloading the new firmware version.

## Transfer the new firmware to the device

Use one of the following methods to update the firmware.

### Use FTP to upgrade the firmware on a network connection

**NOTE:** The device can receive an .RFU file update as long as it is in a Ready state.

The elapsed time for an update depends on the I/O transfer time, as well as the time that it takes for the device to reinitialize. The I/O transfer time depends on a number of things, including the speed of the host computer that is sending the update. If the remote firmware update process is interrupted before the firmware is downloaded (while **Receiving Upgrade** appears on the control-panel display), the firmware file must be sent again. If power is lost during the flash DIMM update (while the **Performing Upgrade** message appears on the control-panel display), the update is interrupted and the message **Resend Upgrade** appears (in English only) on the control-panel display. In this case, you must send the upgrade by using the parallel port. Finally, any jobs that are ahead of the RFU job in the queue are completed before the update is processed.

Follow these instructions to perform the upgrade by using FTP.

1. Take note of the IP address on the HP Jetdirect page. The HP Jetdirect page is the second page that prints when you print the configuration page.

   **NOTE:** Before upgrading the firmware, make sure that the device is not in Sleep mode. Also make sure that any error messages are cleared from the control-panel display.

2. Open an MS-DOS command prompt on your computer.
3. Type: `ftp <TCP/IP ADDRESS>`. For example, if the TCP/IP address is 192.168.0.90, type `ftp 192.168.0.90`.
4. Press Enter on the keyboard.
5. When prompted for the user name, press Enter.
6. When prompted for the password, press Enter.
7. Type `bin` at the command prompt.
8. Press Enter. The message **200 Types set to I, Using binary mode to transfer files** appears in the command window.
9. Type `put <filename>` where <filename> is the name of the .RFU file that was downloaded from the Web, including the path. For example, type `put C:\LJ\M3035FW.RFU`, and then press Enter.

   **NOTE:** If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type `put "C:\MY DOCUMENTS\LJ\M3035FW.RFU"`

   The following series of messages appears in the command window:

   **200 PORT command successful**

   **150 Opening BINARY mode data connection**

   **226 Ready**

**226 Processing Job**

**226 Transfer complete**

Then, a message that contains the transfer-speed information appears.

10. The download process begins and the firmware is updated on the device. This can take approximately five minutes. Let the process finish without further interaction with the device or computer.

**NOTE:** The devcie automatically turns off and then on again after processing the upgrade.

11. At the command prompt, type: `bye` to exit the ftp command.

12. At the command prompt, type: `exit` to return to the Windows interface.

## Use HP Web Jetadmin to upgrade the firmware

This procedure requires that you install HP Web Jetadmin Version 7.0 or later on the computer. Complete the following steps to update a single device through HP Web Jetadmin after downloading the .RFU file from the HP Web site.

1. Start HP Web Jetadmin.

2. Open the **Device Management** folder in the drop-down list in the **Navigation** panel. Navigate to the **Device Lists** folder.

3. Expand the **Device Lists** folder and select **All Devices**. Locate the device in the list of devices, and then click to select it.

   If you need to upgrade the firmware for more than one device, select all of them by pressing the Ctrl key as you click the name of each device.

4. Locate the drop-down box for **Device Tools** in the upper-right corner of the window. Select **Update Printer Firmware** from the action list.

5. If the name of the .RFU file is not listed in the **All Available Images** box, click **Browse** in the **Upload New Firmware Image** dialog box and navigate to the location of the .RFU file that you downloaded from the Web at the start of this procedure. If the filename is listed, select it.

6. Click **Upload** to move the .RFU file from your hard drive to the HP Web Jetadmin server. After the upload is complete, the browser window refreshes.

7. Select the .RFU file from the **Printer Firmware Update** drop-down menu.

8. Click **Update Firmware**. HP Web Jetadmin sends the selected .RFU file to the device. The control panel shows messages that indicate the progress of the upgrade. At the end of the upgrade process, the control panel shows the **Ready** message.

### Use MS-DOS commands to upgrade the firmware

To update the firmware by using a network connection, follow these instructions.

1. From a command prompt or in an MS-DOS window, type the following: `copy /B <FILENAME> \\<COMPUTERNAME>\<SHARENAME>`, where <FILENAME> is the name of the .RFU file (including the path), <COMPUTERNAME> is the name of the computer from which the device is being shared, and <SHARENAME> is the device share name. For example: `C:\>copy /b C:\M3035FW.RFU \\YOUR_SERVER\YOUR_COMPUTER`.

   **NOTE:** If the file name or path includes a space, you must enclose the file name or path in quotation marks. For example, type: `C:\>copy /b "C:\MY DOCUMENTS\M3035FW.RFU" \\YOUR_SERVER\YOUR_COMPUTER`.

2. Press Enter on the keyboard. The control panel shows a message that indicates the progress of the firmware upgrade. At the end of the upgrade process, the control panel shows the **Ready** message . The message **1 file(s) copied** appears on the computer screen.

## Upgrade the HP Jetdirect firmware

The HP Jetdirect network interface in the device has firmware that can be upgraded separately from the device firmware. This procedure requires that you install HP Web Jetadmin Version 7.0 or later on the computer. Complete the following steps to update the HP Jetdirect firmware by using HP Web Jetadmin.

1. Open the HP Web Jetadmin program.
2. Open the **Device Management** folder in the drop-down list in the **Navigation** panel. Navigate to the **Device Lists** folder.
3. Select the device that you want to update.
4. In the **Device Tools** drop-down list, select **Jetdirect Firmware Update**.
5. Under **Jetdirect firmware version** the HP Jetdirect model number and current firmware version are listed. Make a note of these.
6. Go to www.hp.com/go/wja_firmware.
7. Scroll down to the list of HP Jetdirect model numbers and find the model number you wrote down.
8. Look at the current firmware version for the model, and see if it is later than the version you wrote down. If it is, right-click on the firmware link, and follow the instructions on the Web page to download the new firmware file. The file must be saved into the <drive>:\PROGRAM FILES\HP WEB JETADMIN\DOC\PLUGINS\HPWJA\FIRMWARE\JETDIRECT folder on the computer that is running the HP Web Jetadmin software.
9. In HP Web Jetadmin, return to the main device list and select the digital sender again.
10. In the **Device Tools** drop-down list, select **Jetdirect Firmware Update** again.
11. On the HP Jetdirect firmware page, the new firmware version is listed under **Jetdirect Firmware Available on HP Web Jetadmin**. Click the **Update Firmware Now** button to update the Jetdirect firmware.

# Troubleshoot general printing problems

### The device selects media from the wrong tray.

| Cause | Solution |
|---|---|
| The tray selection in the software program might be incorrect. | For many software programs, the tray selection appears on the **Page Setup** menu within the program.<br><br>Remove any media in other trays to make the device select from the correct tray.<br><br>For Macintosh computers, use the HP LaserJet Utility to change the priority of the tray. |
| The configured size does not match the size of the media that is loaded in the tray. | Through the control panel, change the configured size to match the size of the media that is loaded in the tray. |

### The device does not pull media from a tray.

| Cause | Solution |
|---|---|
| The tray is empty. | Load media in the tray. |
| The paper guides are set incorrectly. | To set the guides correctly, see the user guide.<br><br>For the 500-sheet tray, make sure that the leading edge of the media stack is even. An uneven edge can prevent the lift plate from rising. |

### Paper curls when it exits the device.

| Cause | Solution |
|---|---|
| The paper curls when it exits to the top output bin. | Open the rear output bin to allow the paper to exit in a straight path through the device.<br><br>Turn over the paper that you are printing on.<br><br>Reduce the fusing temperature to reduce the curling. (See the user guide.) |

### Print job is extremely slow.

| Cause | Solution |
|---|---|
| The job might be very complex.<br><br>The maximum speed of the device cannot be exceeded even when more memory is added.<br><br>Printing speeds might be automatically reduced when printing on custom-sized media.<br><br>**Note:** Slower speeds are expected when printing on narrow paper, when printing from tray 1, or when using the HIGH 2 fuser mode. | Reduce the complexity of the page or try adjusting the print-quality settings. If this problem occurs frequently, add memory to the device. |

**Print job is extremely slow.**

| Cause | Solution |
| --- | --- |
| You are printing a PDF or PostScript (PS) file but are using a PCL printer driver. | Try using the PS printer driver rather than the PCL printer driver. (You can usually do this from a software program.) |
| In the printer driver, **Type is** is set to card stock, heavy, rough, or bond paper. | In the printer driver, set the type to plain paper (see the user guide).<br><br>**Note**: If you change the setting to plain paper, the print job will print more quickly. However, if you are using heavy media, for best results leave the printer driver set to heavy even though printing might be slower. |

**Print job prints on both sides of the paper.**

| Cause | Solution |
| --- | --- |
| The device is set for duplexing. | See the user guide to change the setting, or see the online Help. |

**Print job contains only one page but the device also processes the back side of the page (the page comes part of the way out, and then goes back into the device).**

| Cause | Solution |
| --- | --- |
| The device is set for duplexing. Even if the print job contains only one page, the device also processes the back side. | See the user guide to change the setting, or see the online Help.<br><br>Do not try to pull the page out of the device before duplexing is complete. Jamming might result. |

**Pages print, but are totally blank.**

| Cause | Solution |
| --- | --- |
| The sealing tape might still be in the print cartridge. | Remove the print cartridge and pull out the sealing tape. Reinstall the print cartridge. |
| The file might have blank pages. | Check the file to make sure that it does not contain blank pages. |
| The print cartridge is empty. | Replace the print cartridge. |

**The device prints, but the text is wrong, garbled, or incomplete.**

| Cause | Solution |
| --- | --- |
| The device cable is loose or defective. | Disconnect the device cable and reconnect it. Try a print job that you know works. If possible, attach the cable and device to another computer and try a print job that you know works. Finally, try a new cable. |

### The device prints, but the text is wrong, garbled, or incomplete.

| Cause | Solution |
| --- | --- |
| The device is on a network or sharing device and is not receiving a clear signal. | Disconnect the device from the network and use a USB cable to attach it directly to a computer. Print a job that you know works. |
| The wrong driver was selected in the software. | Check the software device-selection menu to make sure that the device is selected. |
| The software program is malfunctioning. | Try printing a job from another program. |

### The device does not respond when you select Print in the software.

| Cause | Solution |
| --- | --- |
| The device is out of media. | Add media. |
| The device might be in the manual-feed mode. | Change the device from manual-feed mode. |
| The cable between the computer and the device is not connected correctly. | Disconnect and reconnect the cable. |
| The device cable is defective. | If possible, attach the cable to another computer and print a job that you know works. You might also try using a different cable. |
| The wrong device was selected in the software. | Check the software device selection menu to make sure that the correct device is selected. |
| The device might have a jam. | Clear any jams, paying careful attention to the duplexer area (if your model has a duplexer). See Clear jams on page 234. |
| The software for the device is not configured for the printer port. | Check the software device-selection menu to make sure that it is using the correct port. If the computer has more than one port, make sure that the device is attached to the correct one. |
| The device is on a network and is not receiving a signal. | Check cable connections. Reinstall the printing software. Print a job that you know works.<br><br>Clear any stopped jobs from the print queue. |
| The device is not receiving power. | If no lights are on, check the power-cord connections. Check the power switch. Check the power source. |
| The device is malfunctioning. | Check the control-panel display for messages and lights to determine if the device is indicating an error. Note any messages and see Control-panel messages on page 217. |

# Troubleshoot media-handling problems

If media is feeding incorrectly, use the information in this section to identify and resolve the problem.

## Multiple pages feed

**Table 6-4 Causes for multiple pages feeding**

| Cause | Solution |
|---|---|
| Too much media (particularly envelopes) is loaded in tray 1. | Remove some of the media and resend the print job. |
| The separation rollers and pads in the trays are worn or damaged. | Replace the rollers and pads. |
| The media edges are locked together. | Flex the media stack before loading it into the device. *Do not* fan the media. |
| The spring pushing the separation roller or pad is defective. | Replace the spring. |
| The media is of poor quality. | Check the media type and quality. |

## Pages are wrinkled or folded

**Table 6-5 Causes for wrinkled or folded paper at the paper-path entrance**

| Cause | Solution |
|---|---|
| The feed rollers or registration rollers are dirty or defective. | Replace the affected rollers. |
| The paper path contains foreign substances or dirt. | Remove any foreign substances or dirt from the paper path. |
| The cartridge shutter open/close mechanism is damaged.<br><br>(This can cause jams in which the media is crumpled into an accordion fold under the print cartridge.) | The shutter in the print cartridge should open as you insert the cartridge. If a shutter does not open, replace the print cartridge. |
| The registration assembly is defective. | If the registration arm is dirty, clean it. If the arm is scarred or worn, replace the registration assembly (see Registration assembly on page 200. |

**Table 6-6 Causes for wrinkled or folded paper at the paper-path exit**

| Cause | Solution |
|---|---|
| The fuser inlet guide is dirty. | Replace the fuser (see Fuser on page 156). |
| The fuser pressure roller is dirty or damaged. | Run several cleaning pages through the device. If the problem persists, replace the fuser (see Fuser on page 156). |

## Pages are skewed

**Table 6-7 Causes for skewed pages**

| Cause | Solution |
|---|---|
| Paper dust or dirt has accumulated on the tray feed roller or separation roller. | Clean or replace the rollers. |

**Table 6-7 Causes for skewed pages (continued)**

| Cause | Solution |
| --- | --- |
| The tray feed roller and separation roller are worn irregularly. | Replace the affected roller. |
| The registration assembly is defective. | Replace the registration assembly (see Registration assembly on page 200). |
| Tray 2 is defective. | Replace tray 2. |

# Troubleshoot print-quality problems

This section helps you define print-quality problems and what to do to correct them. Often print-quality problems can be handled easily by making sure that the device is correctly maintained, using print media that meets HP specifications, or running a cleaning page.

## Print-quality checklist

Follow the checklist to solve general print-quality problems.

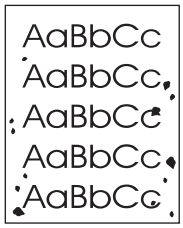
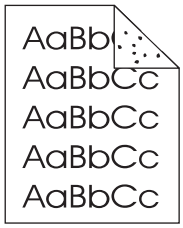
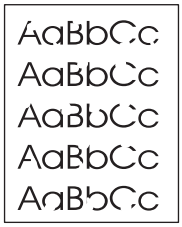
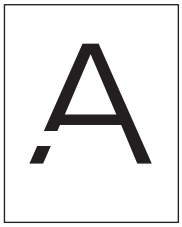
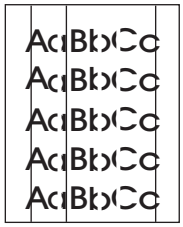
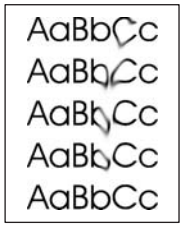
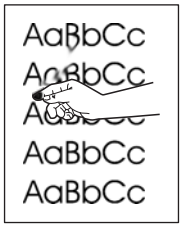
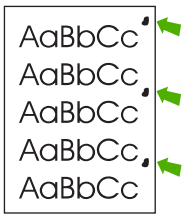
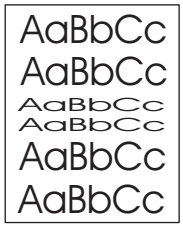
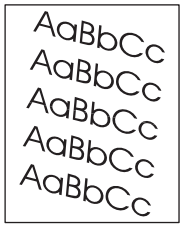
- Process a cleaning page to clean the fuser (see the user guide).
- Check the printer driver to make sure that you are using the best available print-quality option (see the user guide).
- Try printing with one of the alternative printer drivers. The most recent printer drivers area available for download from www.hp.com/go/LJM3027mfp_software or www.hp.com/go/LJM3035mfp_software.
- Clean the inside of the device (the user guide).
- Check the paper type and quality.
- Check to make sure that Economode is off in the software.
- Troubleshoot general printing problems (see Troubleshoot general printing problems on page 264).
- Install a new HP print cartridge, and then check the print quality again. (See the instructions provided with the print cartridge.)

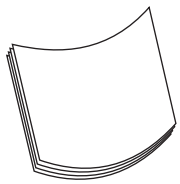
**NOTE:** If the page is totally blank, check to make sure that the sealing tape is removed from the print cartridge and that the print cartridge is installed correctly. Newer devices have been optimized to print characters more accurately. This might result in characters that look lighter or thinner than you are used to from an older device. If the page is printing images darker than those from an older device, and you want the images to match the older device, make these changes in the printer driver: on the **Finishing** tab, select **Print Quality**, select **Custom**, click **Details**, and select **Print Images Lighter**.

## Image-defect examples

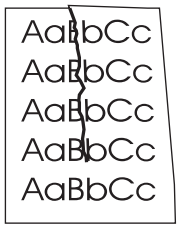
Use the examples in this image-defect table to determine which print-quality problem you are experiencing, and then see the corresponding reference pages to troubleshoot the problem. These examples identify the most common print-quality problems.

**NOTE:** The examples below depict letter-size paper that has passed through the device short-edge first.

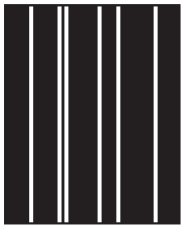
| | | | | |
|---|---|---|---|---|
| | |  |  | |
| See Light print (partial page) on page 271 | See Light print (entire page) on page 272 | See Specks on page 272 | See Specks on page 272 | See Dropouts on page 273 |
|  |  |  | |  |
| See Dropouts on page 273 | See Dropouts on page 273 | See Lines on page 273 | See Gray background on page 274 | See Toner smear on page 274 |
|  |  | |  |  |
| See Loose toner on page 275 | See Repeating defects on page 275 | See Repeating image on page 276 | See Misformed characters on page 276 | See Page skew on page 277 |



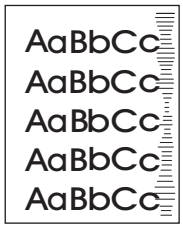
See Curl or wave on page 277



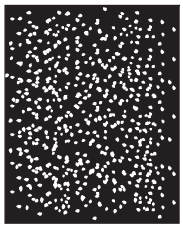

See Wrinkles or creases on page 278



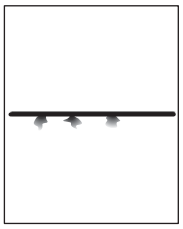
See Vertical white lines on page 278



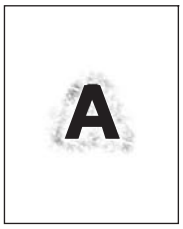

See Tire tracks on page 279



See White spots on black on page 279



See Scattered lines on page 280




See Blurred print on page 280

See Random image repetition on page 281 (dark)

See Random image repetition on page 281 (light)

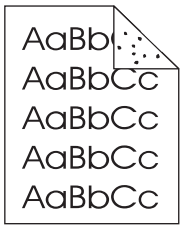
## Light print (partial page)

1. Make sure that the print cartridge is fully installed.
2. The toner level in the print cartridge might be low. Replace the print cartridge.
3. The media might not meet HP specifications (for example, the paper is too moist or too rough).
4. The transfer roller might be worn or contaminated. Replace the transfer roller (see Transfer roller on page 199.

## Light print (entire page)

1. Make sure that the print cartridge is fully installed.
2. Make sure that the EconoMode setting is turned off at the control panel and in the printer driver.
3. Open the Print Quality menu at the device control panel. Open the Toner Density submenu and increase the toner density setting. See the user guide.
4. Try using a different type of media.
5. The print cartridge might be almost empty. Replace the print cartridge.
6. The print cartridge might be installed incorrectly. Reinstall the print cartridge.
7. The transfer roller might be defective or installed incorrectly. Verify that the transfer roller is installed correctly. If the transfer roller is damaged, replace it.
8. The power supply might be defective. Replace the power supply (see High-voltage power supply (HVPS) on page 166.

## Specks



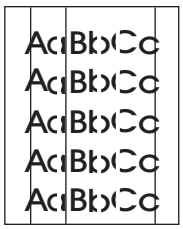

Specks might appear on a page after a jam has been cleared.

1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the device and run a cleaning page to clean the fuser. (See the user guide.)
3. Try using a different type of media.
4. Check the print cartridge for leaks. If the print cartridge is leaking, replace it.
5. The print cartridge might be defective. Replace the print cartridge.
6. The fuser might be defective. Replace the fuser Fuser on page 156.

## Dropouts

1. Make sure that the environmental specifications for the device are being met. (See the user guide.)
2. If the paper is rough, and the toner easily rubs off, open the Print Quality menu at the device control panel. Open the Fuser Modes submenu and then select the paper type that you are using. Change the setting to HIGH 1 or HIGH 2, which helps the toner fuse more completely onto the paper. See the user guide.
3. Try using a smoother paper.
4. The print cartridge might be defective. Replace the print cartridge.
5. Fuser rollers might be dirty. Run a cleaning page (several pages might be required if the fuser is very dirty). If the image defect persists, replace the fuser (see Fuser on page 156.
6. The transfer roller might be damaged, dirty, or worn. Try cleaning the transfer roller by using a dry, lint-free cloth. If the image defect persists, replace the transfer roller.
7. The power supply might be defective. Replace the power supply (see High-voltage power supply (HVPS) on page 166.

## Lines

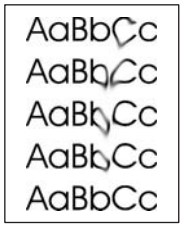


1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the device and run a cleaning page to clean the fuser. (See the user guide.)
3. Replace the print cartridge.

## Gray background

1. Do not use media that has already been run through the device.
2. Try using a different type of media.
3. Print a few more pages to see if the problem corrects itself.
4. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
5. Open the Print Quality menu at the device control panel. Open the Toner Density submenu and increase the toner density setting. See the user guide.
6. Make sure that the environmental specifications for the device are being met. (See the user guide.)
7. Replace the print cartridge.
8. The power supply might be defective. Replace the power supply (see High-voltage power supply (HVPS) on page 166).

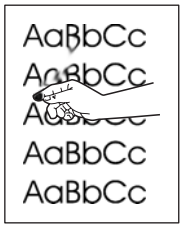
## Toner smear




1. Print a few more pages to see if the problem corrects itself.
2. Try using a different type of media.
3. Make sure that the environmental specifications for the device are being met. (See the user guide.)
4. Clean the inside of the device and run a cleaning page to clean the fuser. (See the user guide.)
5. Replace the print cartridge.
6. The fuser might be defective. Replace the fuser (see Fuser on page 156).
7. The ECU might be defective. Replace the ECU (see Engine control unit (ECU) on page 148).

Also see Loose toner on page 275.

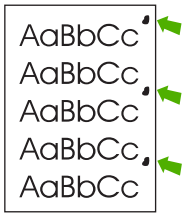
## Loose toner




Loose toner, in this context, is defined as toner that can be rubbed off the page.

1. If the paper is rough, and the toner easily rubs off, open the Print Quality menu at the device control panel. Open the Fuser Modes submenu and then select the paper type that you are using. Change the setting to HIGH 1 or HIGH 2, which helps the toner fuse more completely onto the paper. See the user guide.
2. If you have observed a rougher texture on one side of the paper, try printing on the smoother side.
3. Make sure that the environmental specifications for the device are being met. (See the user guide.)
4. Make sure that type and quality of the media that you are using meet HP specifications.
5. The fuser might be defective. Replace the fuser (see Fuser on page 156).
6. The ECU might be defective. Replace the ECU (see Laser/scanner on page 159).

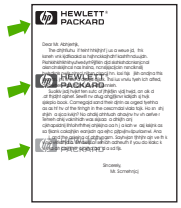
## Repeating defects




1. Print a few more pages to see if the problem corrects itself.
2. Clean the inside of the device and run a cleaning page to clean the fuser. (See the user guide.)
3. Measure the distance between two identical defects and see Image defect ruler on page 259.

Also see Repeating image on page 276.

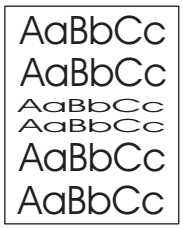
## Repeating image



This type of defect might occur when using preprinted forms or a large quantity of narrow paper.

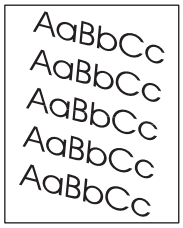
1. Print a few more pages to see if the problem corrects itself.
2. Run a cleaning page, and then print a few more pages to see if the problem persists.
3. Make sure that type and quality of the media that you are using meet HP specifications.
4. Measure the distance between two identical defects and see Image defect ruler on page 259.

## Misformed characters




1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the environmental specifications for the device are being met. (See the user guide.)
3. Reseat cables that are connected to the laser/scanner.
4. Reseat cables that are connected to the ECU.
5. If the image defect persists, the laser/scanner might be defective. Replace the laser/scanner. See Laser/scanner on page 159.
6. Inspect the gears in the main drive assembly and replace the assembly if gears are damaged (see Gear assembly on page 179).
7. The ECU might be defective. Replace the ECU (see Engine control unit (ECU) on page 148).

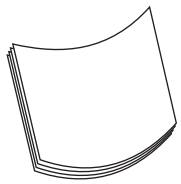
## Page skew




1. Print a few more pages to see if the problem corrects itself.
2. Verify that there are no torn pieces of media inside the device.
3. Make sure that media is loaded correctly and that all adjustments have been made. Make sure that the guides in the tray are not too tight or too loose against the stack. See ADF skew on page 64 for skew specifications.
4. Turn over the stack of paper in the tray. Also, try rotating the stack 180°.
5. Make sure that the type and quality of the media that you are using meet HP specifications.
6. Make sure that the environmental specifications for the device are being met. (See the user guide.)
7. The registration assembly might be installed incorrectly or damaged. Make sure that the registration assembly is installed correctly. If necessary, replace the registration assembly (see Registration assembly on page 200).

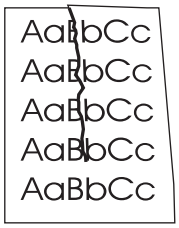
**NOTE:** If copies are skewed, but pages printed from the computer are not skewed, make sure that the ADF input tray is installed correctly (see Figure 5-5 Reinstalling the ADF input tray on page 102). ADF jams and skew can result from incorrect reinstallation.

## Curl or wave



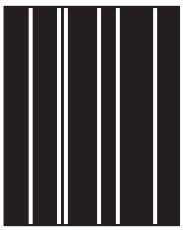
1. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
2. Make sure that the type and quality of the media that you are using meet HP specifications.
3. Make sure that the environmental specifications for the device are being met. (See the user guide.)
4. Try printing to a different output bin.
5. If paper is lightweight and smooth, open the Print Quality menu at the device control panel. Open the Fuser Modes submenu and then select the paper type that you are using. Change the setting to Low, which helps reduce the heat in the fusing process. See the user guide.

## Wrinkles or creases



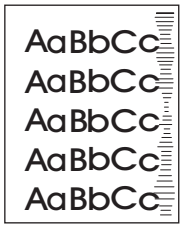

1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the environmental specifications for the device are being met. (See the user guide.)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Make sure that media is loaded correctly and all adjustments have been made. (See the user guide.)
5. Make sure that the type and quality of the media that you are using meet HP specifications.
6. If envelopes are creasing, try storing envelopes so that they lie flat.

## Vertical white lines



1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the type and quality of the media that you are using meet HP specifications.
3. Replace the print cartridge.
4. The fuser might be defective. Replace the fuser. (See Fuser on page 156.)
5. If the image defect persists, the mirror in the laser/scanner might be dirty. Replace the laser/scanner (see Laser/scanner on page 159).
6. If the image defect persists, replace the ECU. (See Engine control unit (ECU) on page 148.)
7. If the image defect persists, replace the formatter. (See Formatter on page 135.)

## Tire tracks

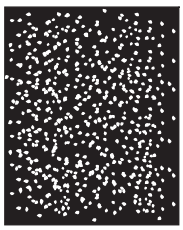



This defect typically occurs when the print cartridge has far exceeded its rated life. For example, if you are printing a very large quantity of pages with very little toner coverage.

1. Perform a half self-test functional check. If the drum is damaged, replace the print cartridge.
2. Run a cleaning page. If the image defect persists, replace the fuser. (See Fuser on page 156.)
3. If the image defect persists, check the device for other sources of contamination or damage in the paper path and clean or replace parts as necessary.

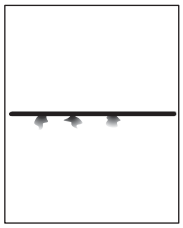
**NOTE:** This type of image defect might also be a repetitive defect. See Image defect ruler on page 259.

## White spots on black



1. Print a few more pages to see if the problem corrects itself.
2. Make sure that the type and quality of the media that you are using meet HP specifications.
3. Make sure that the environmental specifications for the device are being met. (See the user guide.)
4. Replace the print cartridge.

## Scattered lines

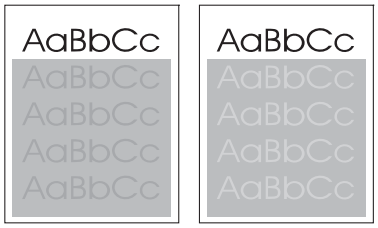


1. Make sure that the type and quality of the media that you are using meet HP specifications.
2. Make sure that the environmental specifications for the device are being met. (See the user guide.)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Open the Print Quality menu at the device control panel. Open the Toner Density submenu and change the toner density setting. See the user guide.
5. Open the Print Quality menu at the device control panel. Open the Optimize submenu and set Line Detail to On. See the user guide.

## Blurred print

1. Make sure that the type and quality of the media that you are using meet HP specifications.
2. Make sure that the environmental specifications for the device are being met. (See the user guide.)
3. Turn over the stack of media in the tray. Also, try rotating the stack 180°.
4. Do not use paper that already has been run through the device.
5. Open the Print Quality menu at the device control panel. Open the Toner Density submenu and decrease the toner density setting. See the user guide.
6. Open the Print Quality menu at the device control panel. Open the Optimize submenu and set High Transfer to Increased. See the user guide.

## Random image repetition




If an image that appears at the top of the page (in solid black) repeats farther down the page (in a gray field), the toner might not have been completely erased from the last job. (The repeated image might be lighter or darker than the field it appears in.)

- Change the tone (darkness) of the field that the repeated image appears in.
- Change the order in which the images are printed. For example, have the lighter image at the top of the page, and the darker image farther down the page.
- From the software application, rotate the whole page 180° to print the lighter image first.
- If the defect occurs later in a print job, turn the device off for 10 minutes, and then turn the device on to restart the print job.

# Troubleshoot fax problems

When an analog fax is sent or received on a LaserJet MFP, any errors that occur during the fax process will be displayed on the MFP control panel and entered into the fax reports. Fax errors can occur for many reasons and often they are due to interruptions or noise on the telephone connection. Any error that takes place during the fax process regardless of where it originates will be displayed by the MFP.

If the fax process is interrupted or an error occurs during a fax transmission or reception, a two part status/error description is generated by the fax subsystem on the MFP. Normal or successful faxes also generate messages indicating success. The message information consists of a text description and a numeric code (a few messages don't include numeric codes). Only the text part of the message will be displayed on the MFP control panel; however, both the text message and numeric code will be listed in the Fax Activity Report, Fax Call Report, and the Fax T.30 Trace (these fax reports can be printed out individually from the MFP control panel – under the **Administration** > **Information** and **Administration** > **Troubleshooting** menus). The numeric code is shown in parentheses after the text part of the message in the reports. For example, if a communication error occurred, the control panel display would show **Fax Failed: Communication Error**. The same error would be shown in the Result field in the Fax Activity Report as **Communication Error (17)**. For this example, the numeric code associated with this communication error is '17'.

The numeric code is generated by the fax modem. Usually a numeric code of (0) indicates a normal modem response. Some messages will always display a numeric code of (0), whereas other messages can have a range of numeric codes depending on the circumstances, and a few messages will have no numeric code. Usually a numeric code of (0) indicates an error was not associated with the fax modem, but occurred in another part of the fax subsystem. Non-zero error codes give further detail into the particular action or process that the modem is executing, and they don't necessarily indicate that there is a problem with the modem.

In the Send-fax messages on page 283 and Receive-fax messages on page 284 tables, the fax messages with the most common number codes are given with recommended corrective action. Several messages that are normal or indicate a normal event are also included in tables. For example, if a fax was not able to be sent to a busy number, a **Fail Busy** message will be shown. Nothing is wrong with the fax subsystem; the message indicates the fax was not completed due to a busy telephone number at the receiving end. Further troubleshooting information is available in the HP MFP Analog Fax 300 User Guide (available at www.hp.com/go/mfpfaxaccessory300).

Persistent error messages with numeric codes different than those listed here require assistance of customer support. A more detailed listing of the last fax call can be printed out before contacting customer support to help identify the problem. The detailed fax listing is called a Fax T.30 Trace and can be printed for the last fax, or it can be set to print whenever a fax error occurs. To print or configure the Fax T.30 Trace, press **Administration**, **Troubleshooting**, and then **Fax T.30 Trace**. You can then print the report for the last fax or configure when to print the T.30 trace.

## Send-fax messages

**Table 6-8 Send-fax messages**

| Message | Error No. | Description | Action(s) |
|---|---|---|---|
| **Cancelled** | 0 | Fax was cancelled by user at control panel of MFP. | None. |
| **Success** | n/a | Fax sent successfully. | None. |
| **Fail Busy** | 0 | The receiving fax machine is busy. | The fax will be retired automatically (if configured), otherwise try resending fax later. |
| **No Answer** | 0 | The receiving fax machine is not answering the call. | The receiving fax machine may be disconnected or turned off; contact the receiver to check the machine. Try resending. |
| **Compression Error** | Any | Fax may be corrupted or not sent. | Try resending fax. |
| **No Dial** | 0 | No dial tone is detected when sending the fax. | Verify the phone line is active; set the sending fax to "not" detect a dial tone. |
| **Modem Fail** | Any | Unexpected or bad response from the internal fax modem to MFP. | Try resending fax; if the error persists, contact service. |
| **Communication Error** | 17 or 36 | Lost telephone connection between sender and receiver. | Try resending the fax. |
| **Communication Error** | Any besides 17 or 36 | General communications issue where the fax transmission was interrupted or did not proceed as expected. | Try resending fax; if the error persists, contact service. |
| **Space Fail** | 0 | Unable to read or write the fax image file to disk; could be corrupt MFP disk or no space available on the MFP's disk. | Try resending fax; if the error persists, contact service. |
| **Page Fail** | 0 | Incompatible page width, or page had too many bad lines. | Try resending fax; if the error persists, contact service. |
| **Memory Error** | 0 | Out of RAM memory on MFP. | If error persists, may need to add RAM to MFP. |
| **Job Fail** | Any | Fax failure; the fax job did not complete. | Try resending fax; if the error persists, contact service. |
| **Power Failure** | 0 | A power failure occurred during the fax transmission on the sending fax MFP. | Try resending the fax. |
| **No Fax Detected** | 17 or 36 | No fax machine was detected at receiving end. | Verify fax number and have receiver verify fax machine is on and connected; then try resending fax. |

## Receive-fax messages

**Table 6-9 Receive-fax messages**

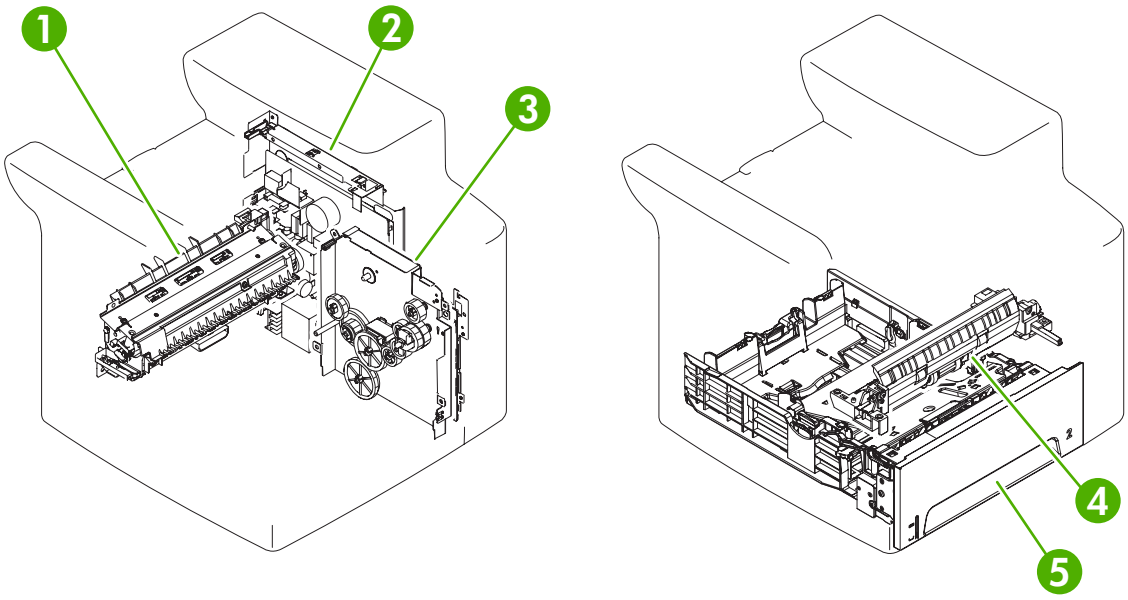
| Message | Error No. | Description | Action(s) |
|---|---|---|---|
| **Success** | n/a | Fax received ok. | None. |
| **Blocked** | n/a | Fax reception was blocked by receiving fax machine using blocked number feature. | None. |
| **Modem Fail** | Any | Unexpected or bad response from the internal modem to the MFP - example is trying to send a fax just as another fax is arriving. | Have fax resent; if the error persists, contact service. |
| **Communication Error** | 17, 36 | Lost telephone connection or interruption between sender/receiver. | Have the sender resend the fax (if the sending machine does not automatically retry). |
| **Communication Error** | Any besides 17 or 36 | General communications issue where the fax transmission was interrupted or did not proceed as expected. | Have fax resent; if the error persists, contact service. |
| **Space Fail** | 0 | Unable to read or write image file to disk; could be corrupt MFP disk or no space on disk. | Have fax resent; if the error persists, contact service. |
| **Page Fail** | 0 | Incompatible page width or page had too many bad lines. | Have fax resent; if the error persists, contact service. |
| **Memory Error** | 0 | Out of RAM memory on MFP. | If error persists, may need to add additional RAM memory to MFP. |
| **Compression Error** | 0 | Corrupted fax - the received image file cannot be decoded. | Have fax resent; enable ECM (Error Correction Mode) if not already. |
| **Print Fail** | 0 | Corrupted fax - the received image file cannot be decoded. | Have fax resent; enable ECM (Error Correction Mode) if not already. |
| **Poll Invalid** | 0 | The fax polling feature attempted to retrieve a fax from another machine but no fax was available. | Contact the administrator of the fax machine being polled and verify a fax is available, and then retry. |
| **Job Fail** | Any | Fax failure; this includes all non-specific failures. | Have fax resent; if the error persists, contact service. |
| **Power Failure** | 0 | A power failure occurred during the fax reception. | Have the sender resend the fax. |
| **No Fax Detected** | 17, 36 | A voice call was made to the fax. | None |

# Diagrams

## Device component locations

### Main assemblies

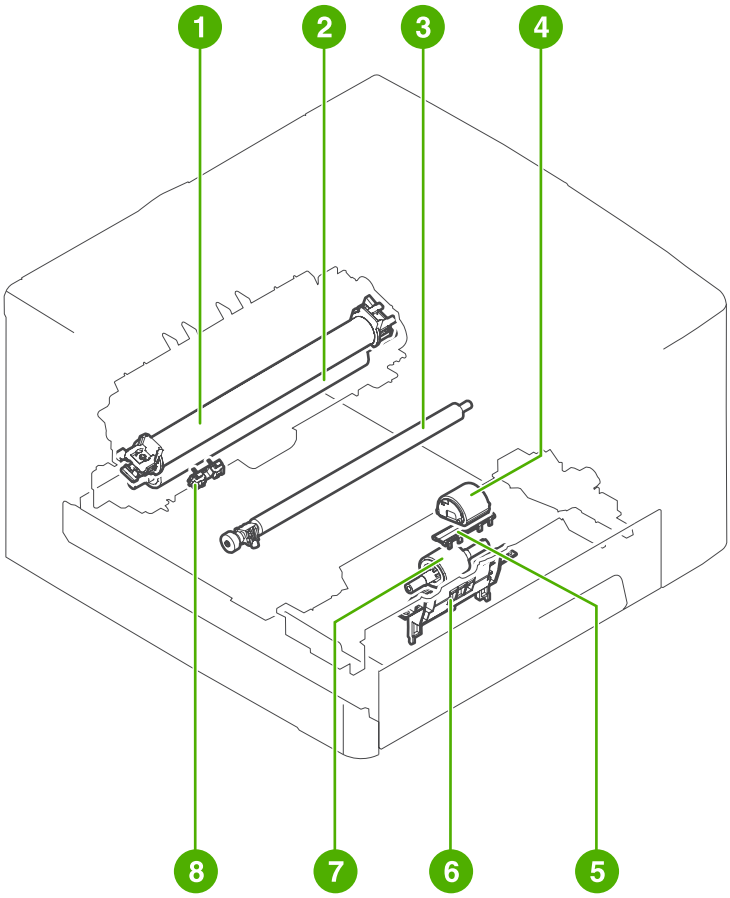
**Figure 6-5** Main assemblies, HP LaserJet M3027/M3035




| | |
|---|---|
| 1 | Fuser |
| 2 | Engine controller assembly (ECU) |
| 3 | Drive assembly |
| 4 | Pick-up assembly |
| 5 | Tray 2 |

### Main parts

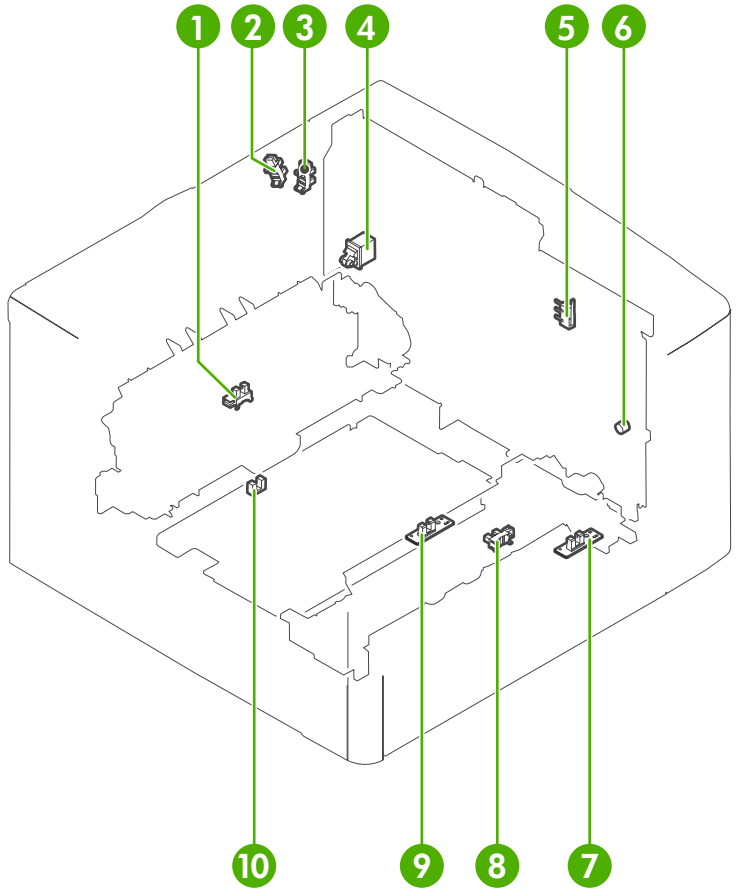
**Figure 6-6** Main parts, HP LaserJet M3027/M3035




| | |
|---|---|
| 1 | Fuser film |
| 2 | Pressure roller |
| 3 | Transfer charging roller |
| 4 | Tray 1 pick-up roller |
| 5 | Tray 1 separation pad |
| 6 | Tray 2 pick-up roller |
| 7 | Tray 2 Memory tag contact |
| 8 | Memory tag contact |

## Sensors and switches

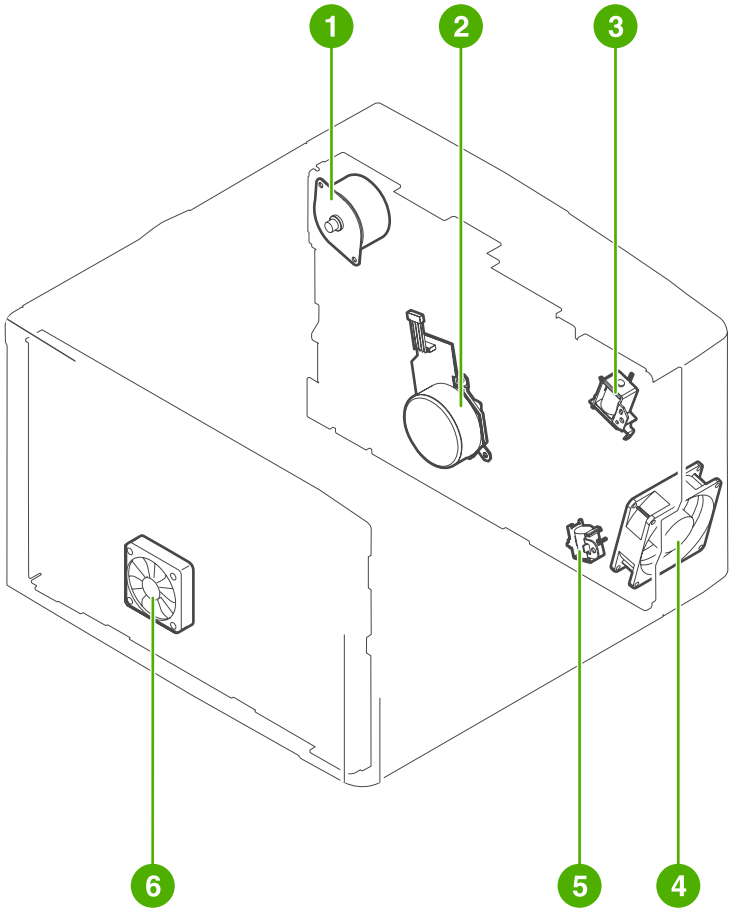
**Figure 6-7** Sensors and switches




| | |
|---|---|
| 1 | Delivery sensor (SR2) |
| 2 | Output-bin-full sensor (PS4) |
| 3 | Face-up cover sensor (PS1) |
| 4 | Power switch (SW101) on ECU PCA |
| 5 | Door switch (SW501) |
| 6 | Engine-test-print button (SW401) on test print switch PCA |
| 7 | Tray 1 media-present sensor (PS902) on tray 1 sensor PCA |
| 8 | Media-width sensor (PS903) on page-width sensor PCA |
| 9 | Top-of-page sensor (PS901) on top-of-page sensor PCA |
| 10 | Duplex sensor (PS502) on high-voltage power supply PCA |

## Motors, fans, and solenoids

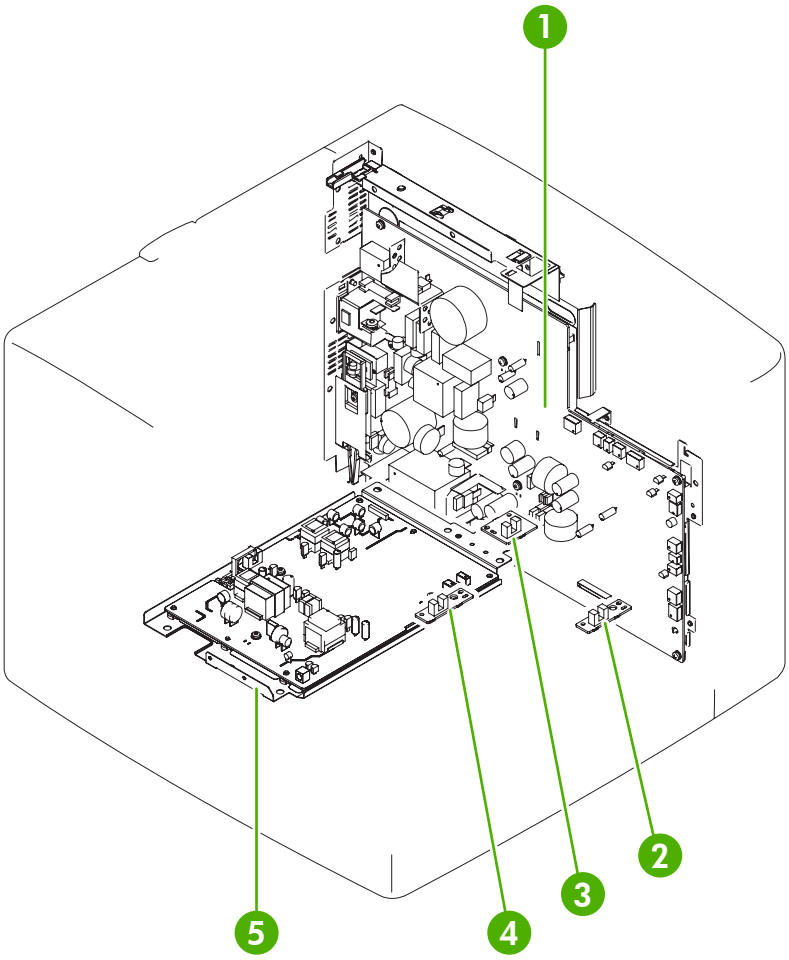
**Figure 6-8** Motors, fans, and solenoids, HP LaserJet M3027/M3035




| | |
|---|---|
| 1 | Fuser motor (M2) |
| 2 | Main motor (M1) |
| 3 | Tray 1 pickup solenoid (SL1) |
| 4 | Main fan (right-side fan; FM1) |
| 5 | Tray 2 pickup solenoid (SL2) |
| 6 | Sub fan (left-side fan; FM2) |

## PCAs

**Figure 6-9** PCAs




| | |
|---|---|
| 1 | ECU |
| 2 | Tray 1 sensor PCA (PS902) |
| 3 | Paper-width sensor PCA (PS903) |
| 4 | Top-of-page sensor PCA (PS901) |
| 5 | High-voltage PCA |

# Interlocks and linkages

**Table 6-10 Interlocks and linkages**

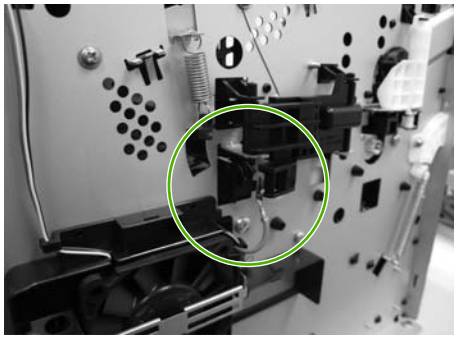
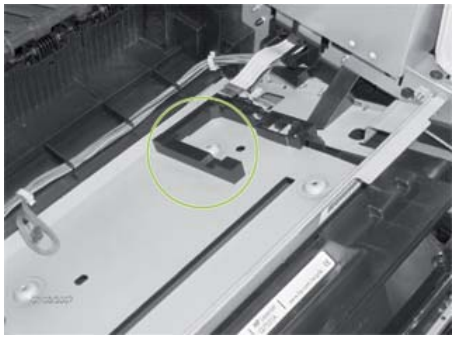
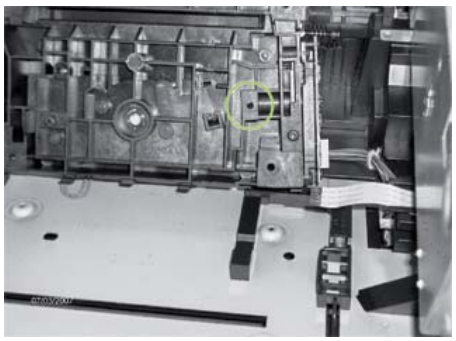
| Interlock or linkage | Location | Purpose |
|---|---|---|
| | Cartridge door opening – front. Switch SW501 | 1. Cartridge door open detection.<br>2. Linkage also allows 24VU to be present for the HVPS. |
|  | Cartridge presence bias sensor | When cartridge is in place, the bias connection provides the feedback to determine whether or not the cartridge is in place. |
|  | Under laser/scanner actuator | Opens laser beam shutter – pushes on the pin on bottom of laser/scanner |
|  | Pin - Bottom of laser/ scanner | Opens laser beam shutter – shutter is spring loaded in closed position. Cartridge in place PLUS door closed = shutter open. |

**Table 6-10 Interlocks and linkages (continued)**

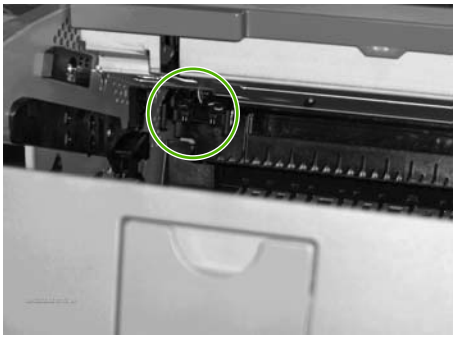
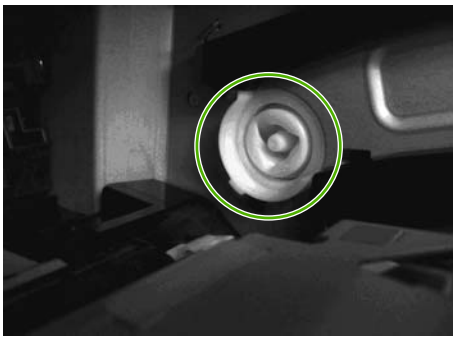
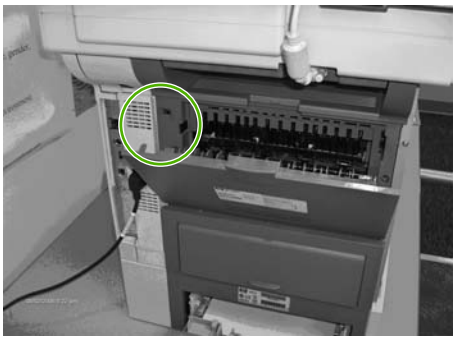
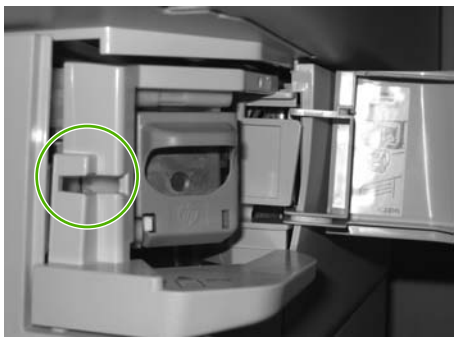
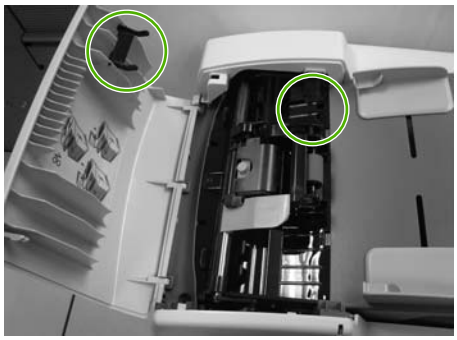
| Interlock or linkage | Location | Purpose |
|---|---|---|
|  | Memory tag connection. Inside front door. | Keeps track of the toner cartridge activity and recognizes whether or not the cartridge is an HP original. |
| | Cartridge door – front side | Link attached by white hinge actuates cam which engages cartridge when the front door closes and disengages when the front door gets opened. |
|  | Cartridge opening – front door. | Cartridge drive |
|  | Face up tray sensor PS1. Rear door. | Determines the paper delivery path, either face up or face down. If the rear door is open, paper is delivered face up automatically by the interaction of PS1 sensor and its actuator located at the rear door. |

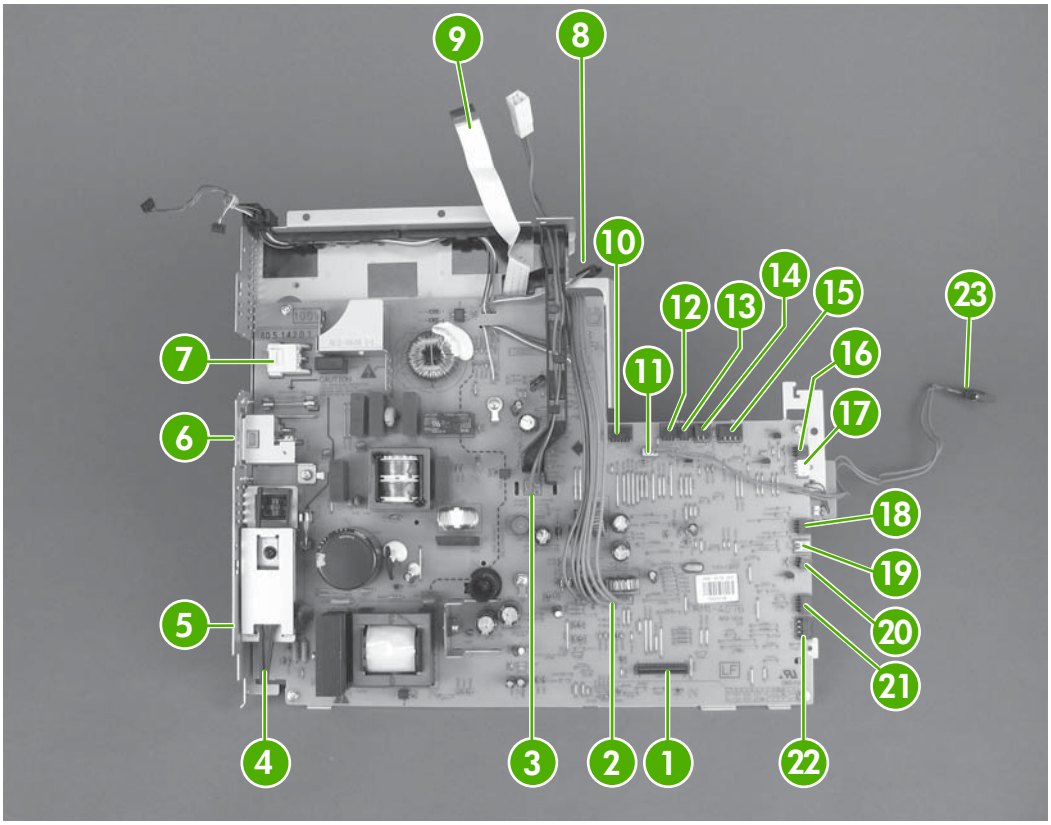
**Table 6-10 Interlocks and linkages (continued)**

| Interlock or linkage | Location | Purpose |
|---|---|---|
|  | Stapler door switch. | Safety switch to prevent 24V for the stapler when the stapler door is open. |
| | ADF cover switch | Determines when the ADF cover is open or closed. |
|  | ADF presence of paper. Inside ADF pickup area. | Determines when paper is placed in the ADF to be copied. |
| | Paper length sensor. Inside the ADF pickup area. | It determines the length of the paper being fed through the ADF in order to pick the correct paper size from the trays. |

## Wiring diagrams

The following figures show wiring and circuitry layout of the HP LaserJet M3027/M3035.

**Figure 6-10** ECU connections




| | | | |
|---|---|---|---|
| 1 | J404 – HVPS | 12 | J512 – Left-side fan (FM2) |
| 2 | Dc voltage to formatter | 13 | J510 – Memory tag |
| 3 | Dc power to ADF/scanner assembly | 14 | J402 – Laser/scanner motor |
| 4 | SW101 – Power switch | 15 | J405 – Thermistor and delivery sensor (SR2) |
| 5 | Dc power to stapler power-supply | 16 | J508 – Tray 1 solenoid (SL1) |
| 6 | Power cable connector | 17 | J509 – Right-side fan (FM1) |
| 7 | J102 AC power to fuser | 18 | J503 – Tray 1 media-present sensor (PS902) |
| 8 | 501 Fuser motor inline connector (wired to ECU) | 19 | J502 – Tray 2 media-present sensor (PS3) |
| 9 | J403 – Laser/scanner (wired to ECU) | 20 | J504 – Tray 2 solenoid (SL2) |
| 10 | J407 – Main motor | 21 | J511 (not used) |
| 11 | J408 – Cartridge-door switch (wired to ECU) | 22 | J406 – To optional tray 3 |
| | | 23 | J408 Door switch harness hardwired to ECU |

**Figure 6-11** Circuit diagram (1 of 2)

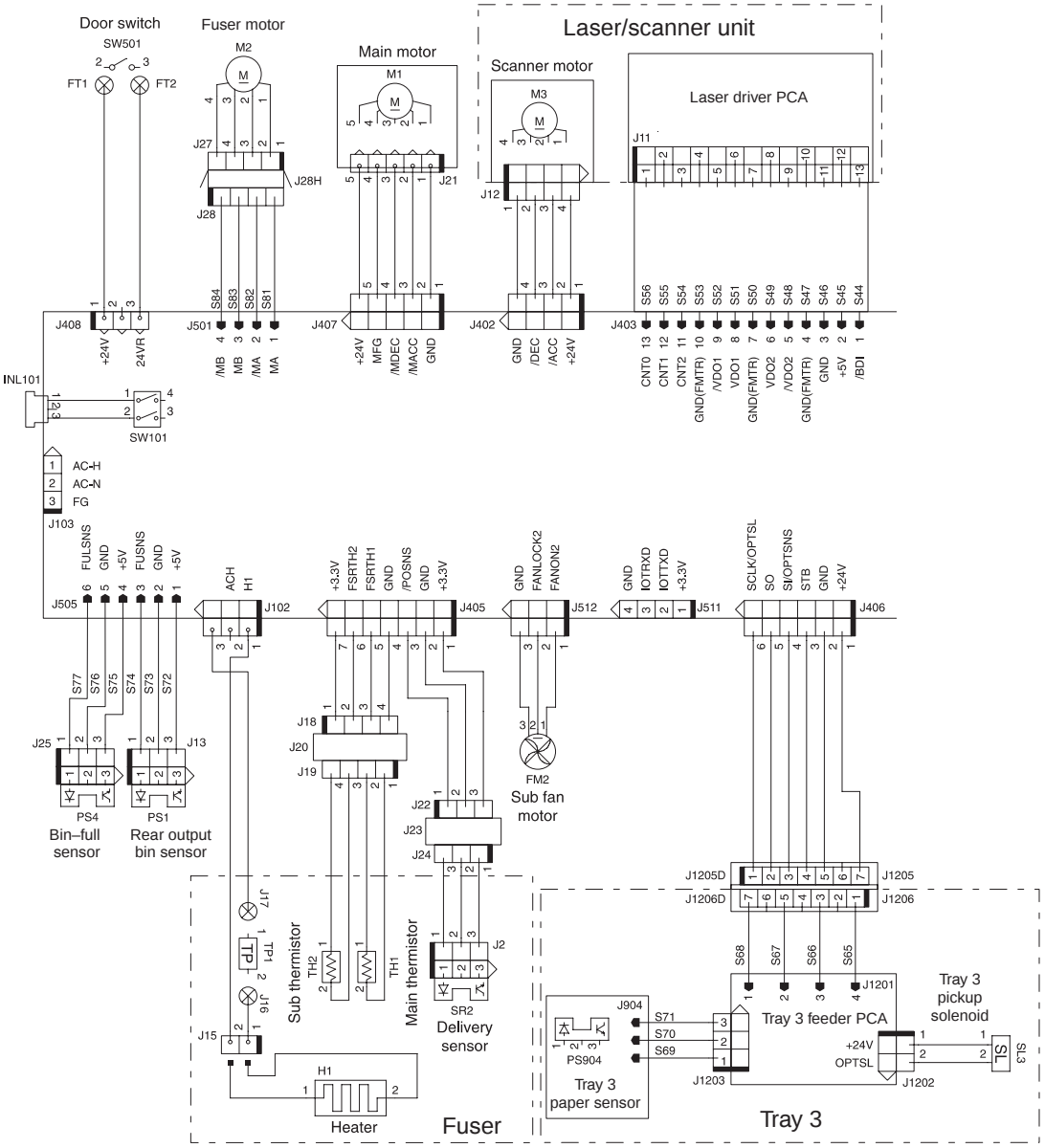



**Figure 6-12** Circuit diagram (2 of 2)

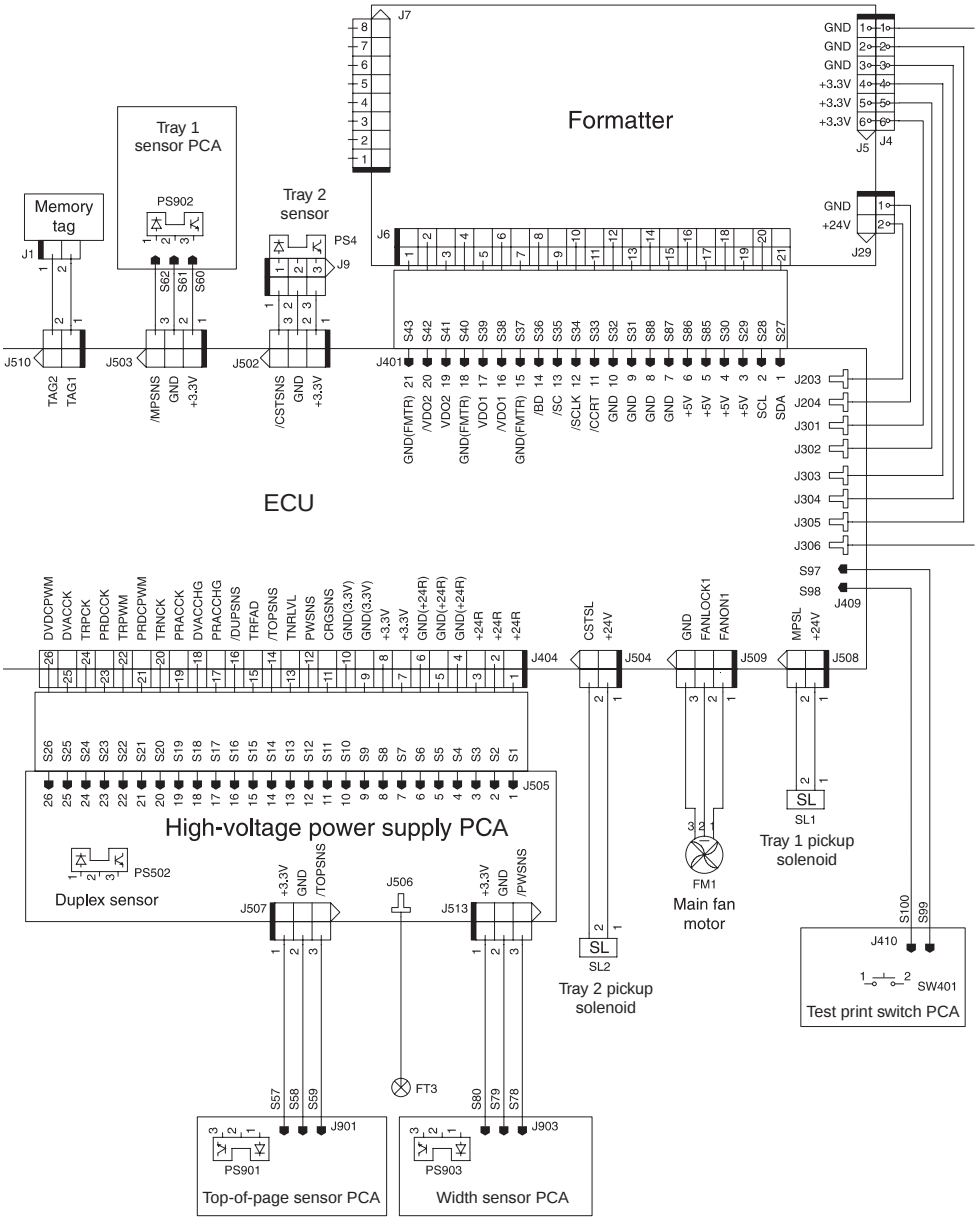



**Figure 6-13** Electrical structure (1 of 2)

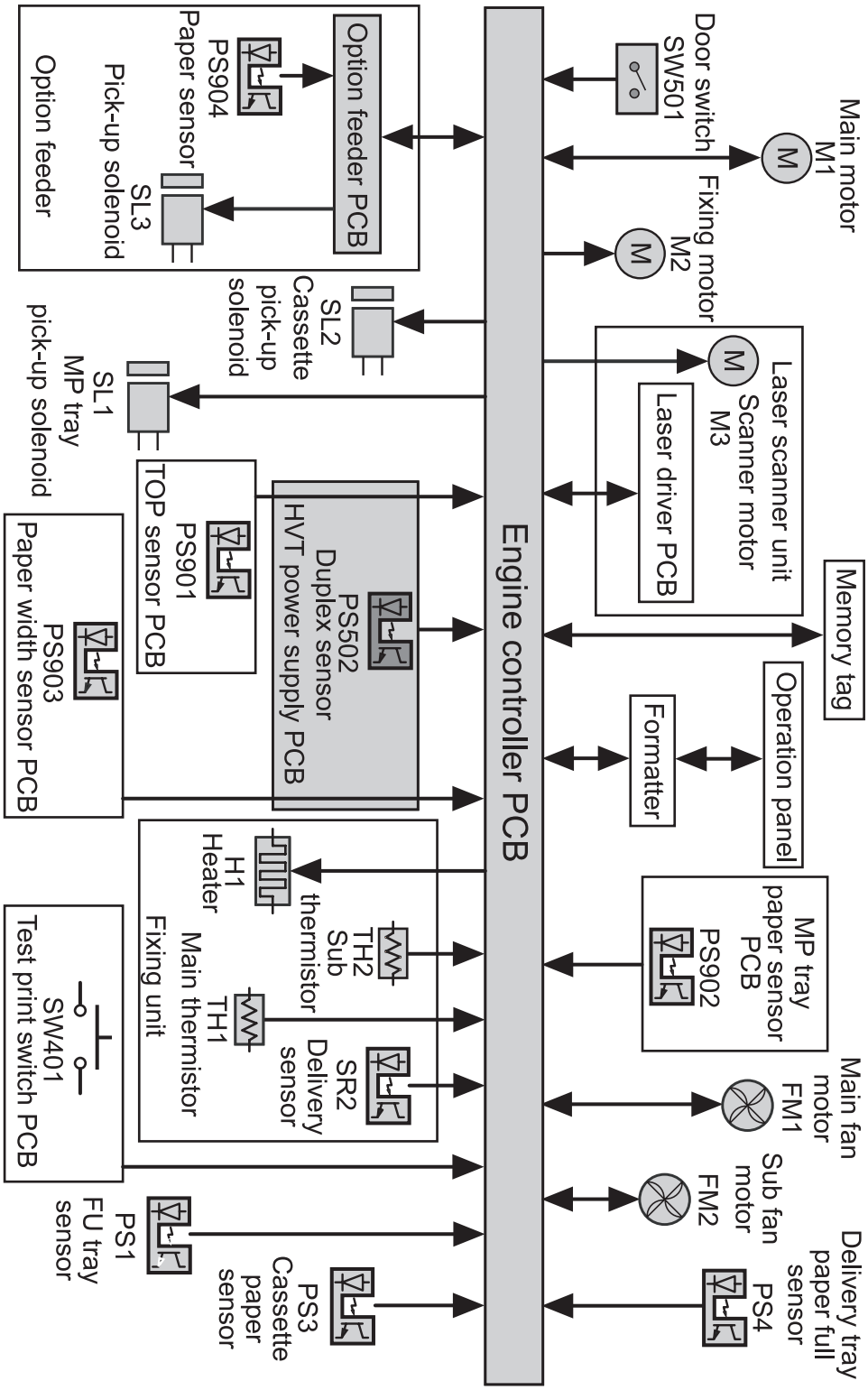
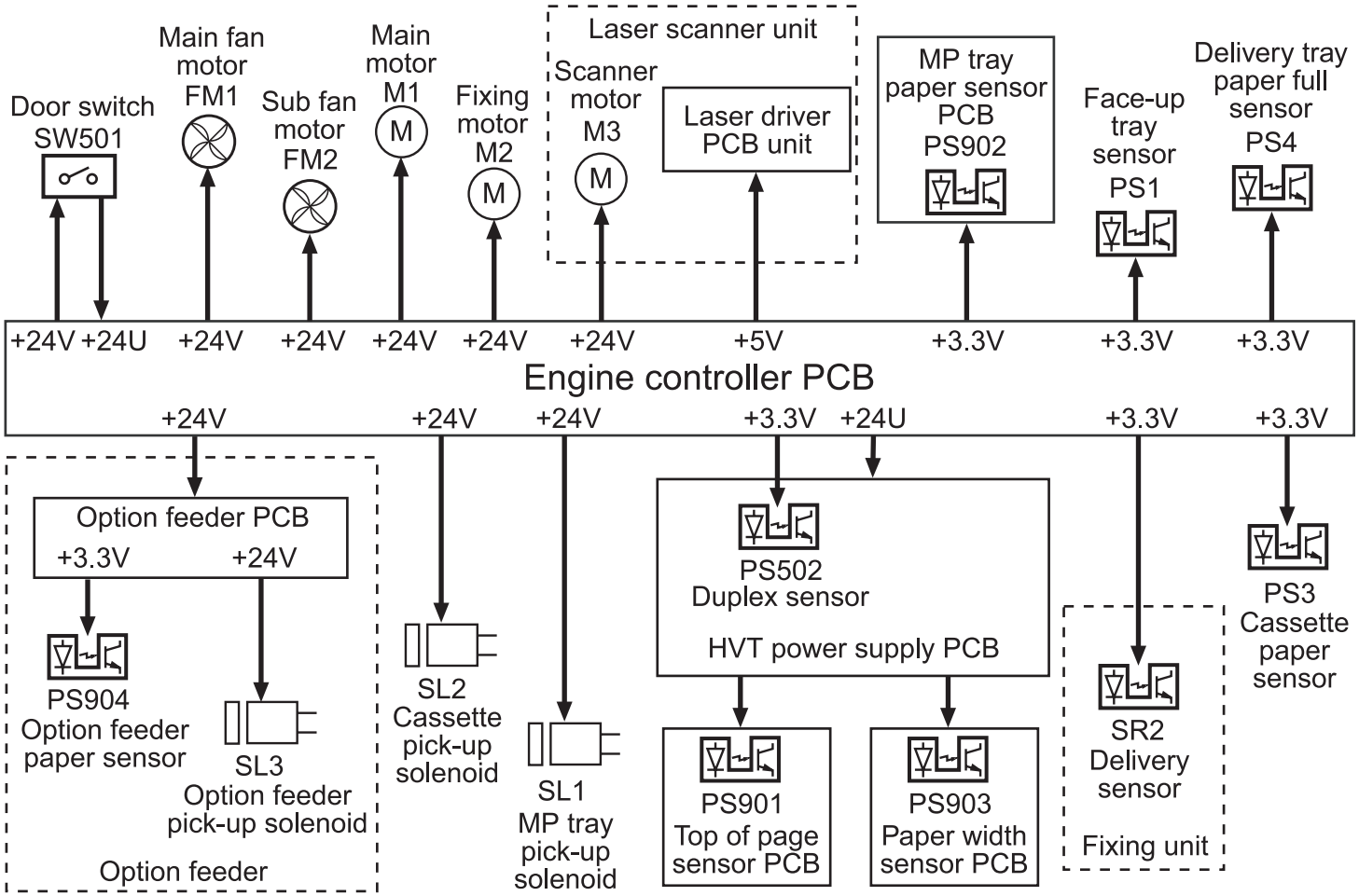



**Figure 6-14** Electrical structure (2 of 2)


Door switch
SW501
Main fan motor
FM1
Sub fan motor
FM2
Main motor
M1
Fixing motor
M2
Laser scanner unit
Scanner motor
M3
Laser driver
PCB unit
MP tray paper sensor
PCB
PS902
Face-up tray sensor
PS1
Delivery tray paper full sensor
PS4
+24V +24U
+24V
+24V
+24V
+24V
+24V
+5V
+3.3V
+3.3V
+3.3V
Engine controller PCB
+24V
+24V
+24V
+3.3V
+24U
+3.3V
+3.3V
Option feeder PCB
+3.3V
+24V
PS904
Option feeder paper sensor
SL3
Option feeder pick-up solenoid
Option feeder
SL2
Cassette pick-up solenoid
SL1
MP tray pick-up solenoid
PS502
Duplex sensor
HVT power supply PCB
PS901
Top of page sensor PCB
PS903
Paper width sensor PCB
SR2
Delivery sensor
Fixing unit
PS3
Cassette paper sensor

# 7 Parts and diagrams


- Ordering parts and supplies
- ADF/scanner assembly
- Covers
- Internal components
- Tray 2 pickup assembly
- Alphabetical parts list
- Numerical parts list

# Ordering parts and supplies

## Parts

Order replacement parts from the following Web sites:

h30074.www3.hp.com/csn-aux/srvcdlvry/epdo/default/ePDOLogin.asp (technicians)

h20141.www2.hp.com/hpparts (customers)

## Related documentation and software

Order documentation and software from the companies listed in the following table; some documentation and software is available at the following Web sites.

**Table 7-1 Technical support Web sites**

| | |
|---|---|
| **HP Customer Care Online**<br><br>Software drivers, support documentation, and answers to frequently asked questions | www.hp.com/support |
| **HP Technical Training**<br><br>(North America)<br><br>Classes and schedules | education.itrc.hp.com/TrainerII/en-US/index.jsp |

## Supplies

Device supplies are listed in this chapter. Consumables are available directly from HP at the following numbers.

- US: 800-538-8787
- Canada: 800-387-3154 (in Toronto: 416-671-8383)
- United Kingdom: 0734-441212
- Germany: 0130-3322

Contact your local HP Parts Coordinator for other local phone numbers.

# ADF/scanner assembly

**Figure 7-1** ADF/scanner assembly

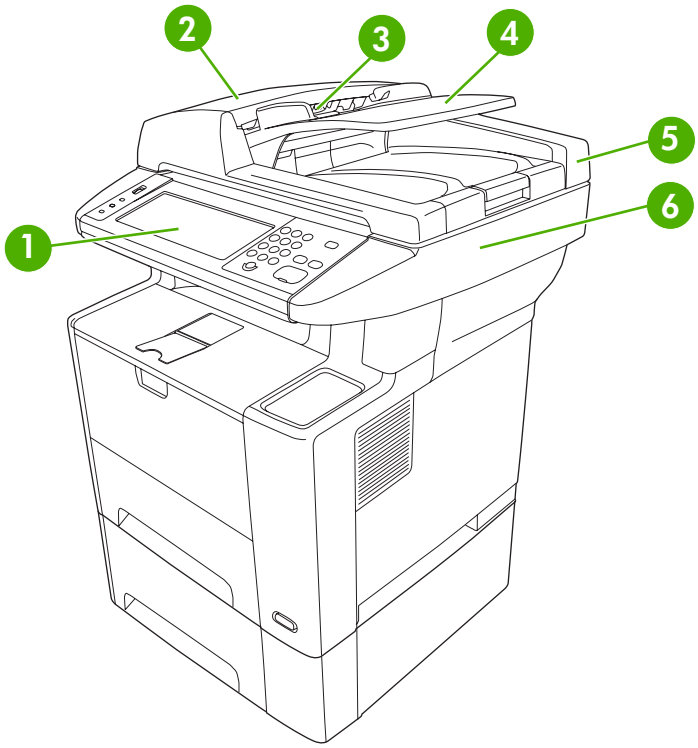


**Table 7-2 ADF/scanner assembly**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Control panel | CB414-60101 | 1 |
| 2 | Cover, ADF | CB414-67902 | 1 |
| 3 | ADF feed roller kit | CB414–67904 | 1 |
| 4 | Input tray, ADF | CB414-67903 | 1 |
| 5 | ADF assembly without Scanner | CB414-67916 | 1 |
| 5 | Legal-size ADF assembly without scanner | CC476-67909 | 1 |
| 6 | Scanner assembly without ADF | CB414-67905 | 1 |
| 6 | Legal-size scanner assembly without ADF | CC476-67910 | 1 |

# Covers

**Figure 7-2** Covers

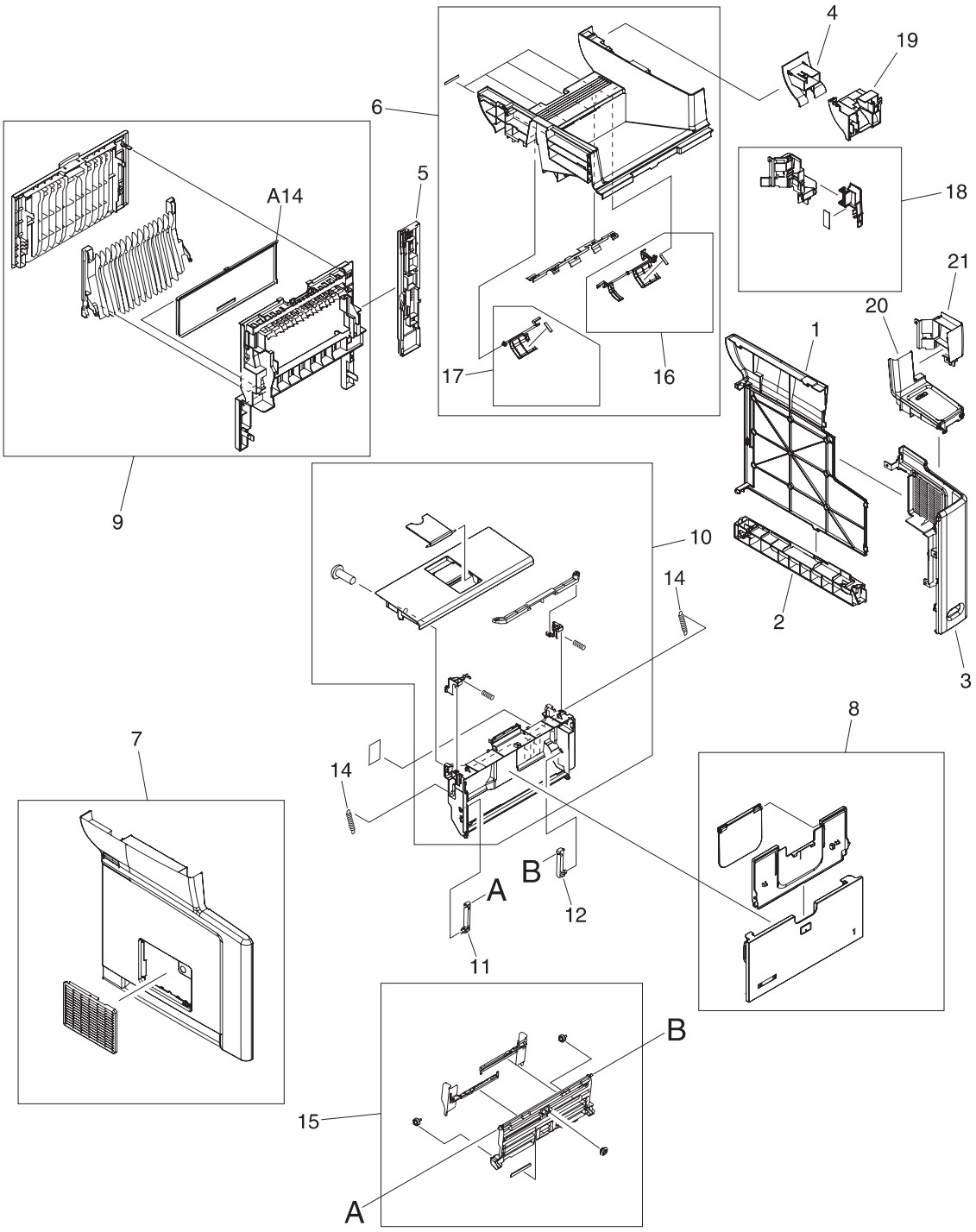


**Table 7-3 Covers**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Cover, right-side (DIMM cover) | RC2-0722-000CN | 1 |
| 2 | Cover, right lower | RC2-0603-000CN | 1 |
| 3 | Cover, right front | RL1-1723-000CN | 1 |
| 4 | Cover, fax | RC2-0726-000CN | 1 |
| 5 | Cover, I/O | RC2-0612-000CN | 1 |
| 6 | Top cover assembly | RM1-3772-000CN | 1 |
| 7 | Cover, left | RM1-3773-000CN | 1 |
| 8 | Tray 1 cover assembly | RM1-3723-000CN | 1 |
| 9 | Rear cover assembly | RM1-3724-000CN | 1 |
| 10 | Cartridge door assembly | RM1-3722-000CN | 1 |
| 11 | Hinge, left | RC1-4057-000CN | 1 |
| 12 | Hinge, right | RC1-4058-000CN | 1 |
| 14 | Spring, tension | RU5-2388-000CN | 2 |
| 15 | Tray 1 assembly | RM1-1490-000CN | 1 |
| 16 | Flag assembly, full detect | RM1-3742-000CN | 1 |
| 17 | Flag assembly, face-down | RM1-3743-000CN | 1 |
| 18 | Cover, stapler | RM1-3790-000CN | 1 |
| 19 | Cover, fax internal (fax rail) | RC2-0729-000CN | 1 |
| 20 | Paper clip tray | RC2-0724-000CN | 1 |
| 21 | Stapler door (for devices with staplers) | CB414-40064 | 1 |
| 21 | Cover (replaces the stapler door for devices without staplers) | RC2-0727-000CN | 1 |
| A14 | Cover, legal | RL1-1366-000CN | 1 |

# Internal components

**Figure 7-3** Internal components (1 of 6)

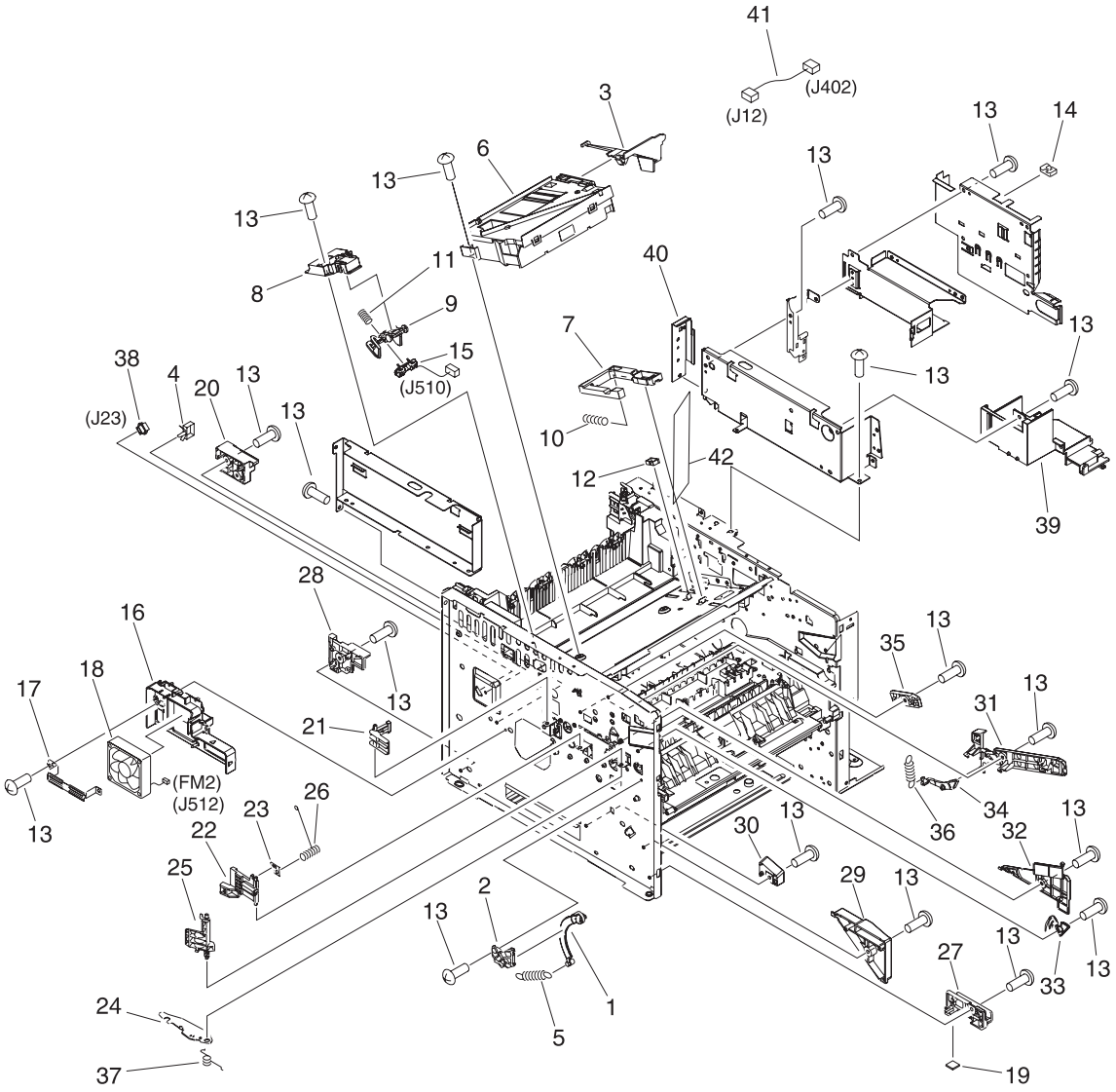


**Table 7-4 Internal components (1 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Arm, door | RC1-4055-000CN | 1 |
| 2 | Guide, door arm | RC1-4056-000CN | 1 |
| 3 | Duct, scanner | RC1-4128-020CN | 1 |
| 4 | Clip clamp, wire | WT2-5694-000CN | 1 |
| 5 | Spring, tension | RU5-2407-000CN | 1 |
| 6 | Laser/scanner assembly | RM1-1521-030CN | 1 |
| 7 | Link, laser shutter | RC1-4125-000CN | 1 |
| 8 | Stay, tag holder | RC1-4126-000CN | 1 |
| 9 | Holder, tag | RC1-4127-000CN | 1 |
| 10 | Spring, compression | RU5-2404-000CN | 1 |
| 11 | Spring, compression | RU5-2405-000CN | 1 |
| 12 | Clip, cable | WT2-5812-000CN | 1 |
| 13 | Screw, D, M3x8 | XA9-1671-000CN | 13 |
| 14 | Clip, cable | WT2-5056-000CN | 1 |
| 15 | Cable, memory tag | RM1-4054-000CN | 1 |
| 16 | Holder, sub fan | RC2-0622-000CN | 1 |
| 17 | Plate, fan shield, left | RC2-0623-000CN | 1 |
| 18 | Fan, left-side | RK2-1499-000CN | 1 |
| 19 | Foot, rubber | RA0-1003-000CN | 3 |
| 20 | Holder | RC1-4009-000CN | 1 |
| 21 | Lever, grounding contact | RC1-4065-000CN | 1 |
| 22 | Lever, grounding contact | RC1-4066-020CN | 1 |
| 23 | Spring, leaf | RC1-4067-000CN | 1 |
| 24 | Plate, protective | RC1-4136-000CN | 1 |
| 25 | Cam, contact | RC1-4137-020CN | 1 |
| 26 | Spring, compression | RC1-4140-000CN | 1 |
| 27 | Guide, cassette, left front | RC2-0565-000CN | 1 |
| 28 | Guide, cassette, left rear | RC2-0566-000CN | 1 |
| 29 | Guide, center plate, left | RC2-0567-000CN | 1 |
| 30 | Stopper, feed guide, left | RC2-0585-000CN | 1 |
| 31 | Guide, cartridge, left upper | RC2-0703-000CN | 1 |
| 32 | Guide, cartridge, left lower | RC2-0704-000CN | 1 |
| 33 | Lever, drive release | RC2-0705-000CN | 1 |
| 34 | Lever, cartridge clamp | RC2-0706-000CN | 1 |

**Table 7-4 Internal components (1 of 6) (continued)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 35 | Stopper, cartridge, left | RC2-0707-000CN | 1 |
| 36 | Spring, tension | RU5-2403-000CN | 1 |
| 37 | Spring, torsion | RU5-2410-020CN | 1 |
| 38 | Connector, snap-tight, black | VS1-7177-003CN | 1 |
| 39 | Tray, staple | RC2-0725-000CN | 1 |
| 40 | Plate, I/O | RC2-0736-000CN | 1 |
| 41 | Cable assembly | RM1-4053-000CN | 1 |
| 42 | Plate, Long I/O | CB414-60150 | 1 |
| (not shown) | Stapler (see Stapler on page 136) | CB414-60187 | 1 |
| (not shown) | Stapler assembly (bracket and stapler) (see Stapler on page 136) | CB414-67917 | 1 |
| (not shown) | Power-supply, stapler (see Stapler on page 136) | Q7429-69501 | 1 |
| (not shown) | Formatter PCA (see Formatter on page 135) | Q7819-60001 | 1 |
| (not shown) | Hard disk drive (see Disk drive on page 132) | 0950-4753 | 1 |
| (not shown) | Hard disk drive data cable (see Disk drive on page 132) | 5851-2808 | 1 |
| (not shown) | Hard disk drive power cable (see Disk drive on page 132) | 5851-2809 | 1 |
| (not shown) | Hard disk drive sheet metal assembly | CB414-60156 | 1 |
| (not shown) | Hard disk drive assembly | CB414-69001 | 1 |
| (not shown) | Fax card PCA (see Fax accessory on page 130) | Q3701-60012 | 1 |
| (not shown) | Fax power cable (formatter to fax) (see Fax accessory on page 130) | 5851-2503 | 1 |
| (not shown) | Fax sheet metal assembly | CB414-60148 | 1 |

**Figure 7-4** Internal components (2 of 6)

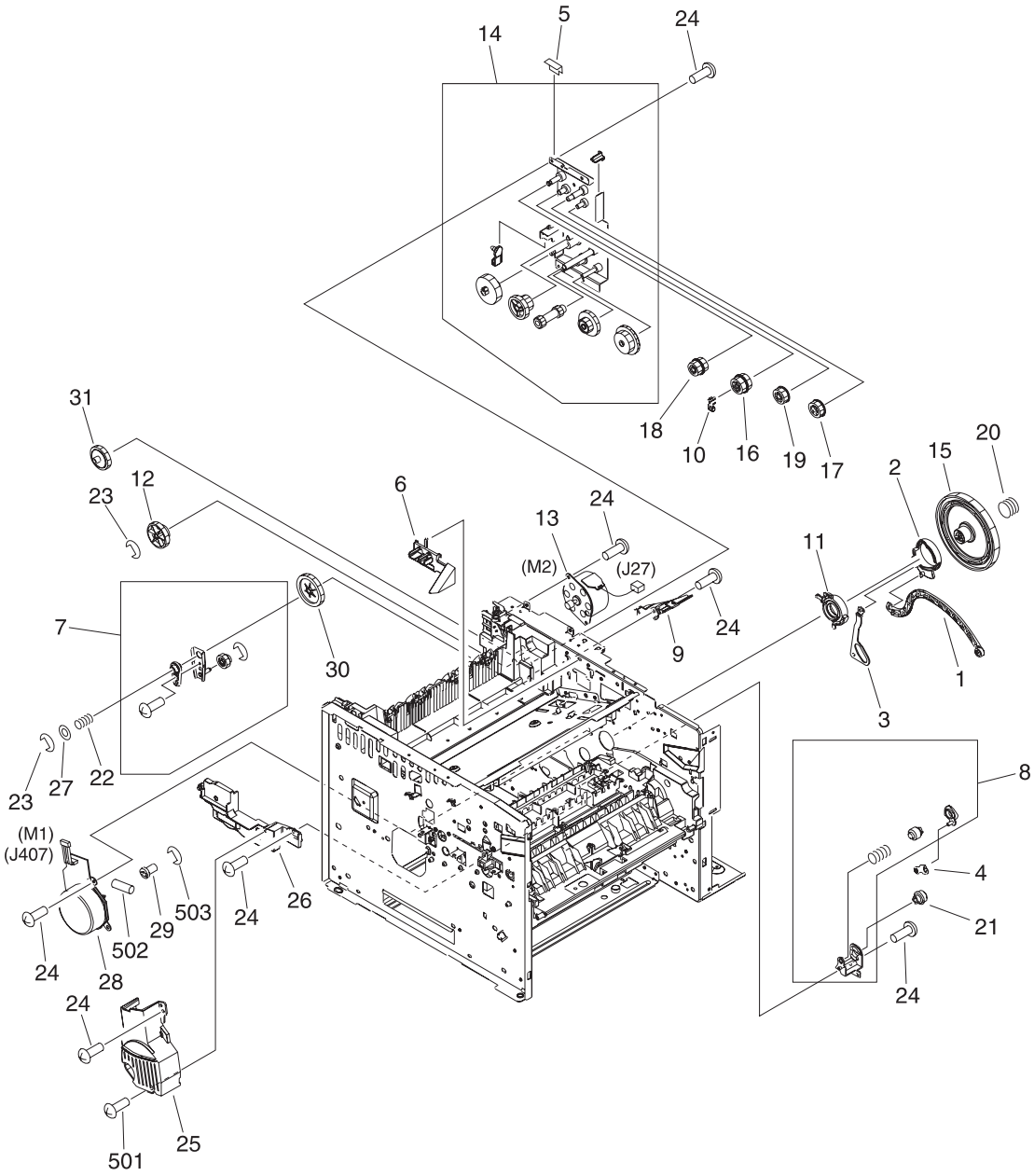


**Table 7-5 Internal components (2 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Lever, coupling | RC1-4115-000CN | 1 |
| 2 | Cam | RC1-4114-000CN | 1 |
| 3 | Lever, drive release | RC1-4116-000CN | 1 |
| 4 | Link, drive release | RC1-4117-000CN | 1 |
| 5 | Film, fuser drive side plate | RC2-0649-000CN | 1 |
| 6 | Duct, cartridge | RC2-0590-000CN | 1 |
| 7 | Pendulum assembly | RM1-3748-000CN | 1 |
| 8 | Drive release assembly | RM1-1522-000CN | 1 |
| 9 | Guide, air | RC2-0648-000CN | 1 |
| 10 | Stopper, fuser | RC2-0657-000CN | |
| 11 | Bushing, inner | RC2-0701-000CN | 1 |
| 12 | Gear, 65T | RU5-0962-000CN | 1 |
| 13 | Motor, stepping | RK2-1489-000CN | 1 |
| 14 | Fixing drive side plate assembly | RM1-3746-000CN | 1 |
| 15 | Gear, 201t | RU5-0950-000CN | 1 |
| 16 | Gear, 20T/20T | RU5-0956-000CN | 1 |
| 17 | Gear, 20T | RU5-0957-000CN | 1 |
| 18 | Gear, 17T/17T | RU5-0958-000CN | 1 |
| 19 | Gear, 19T | RU5-0959-000CN | 1 |
| 20 | Spring, compression | RU5-2401-000CN | 1 |
| 21 | Gear, 12T | RU5-0394-000CN | 1 |
| 22 | Spring, compression | RU5-2920-000CN | 1 |
| 23 | E-ring | XD2-1100-402CN | 2 |
| 24 | Screw, D, M3x8 | XA9-1671-000CN | 1 |
| 24 | Screw, RS, M3x8 | XA9-1500-000CN | 7 |
| 25 | Cover, main motor | RC1-4108-000CN | 1 |
| 26 | Cover, gear | RC2-0579-000CN | 1 |
| 27 | Washer | RC2-0652-000CN | 1 |
| 28 | Motor, dc, 26.2 W | RK2-1488-000CN | 1 |
| 29 | Gear, 16T | RU5-0951-000CN | 1 |
| 30 | Gear, 43T | RU5-0955-000CN | 1 |
| 31 | Gear, 31T | RU5-0960-000CN | 1 |

**Figure 7-5** Internal components (3 of 6)

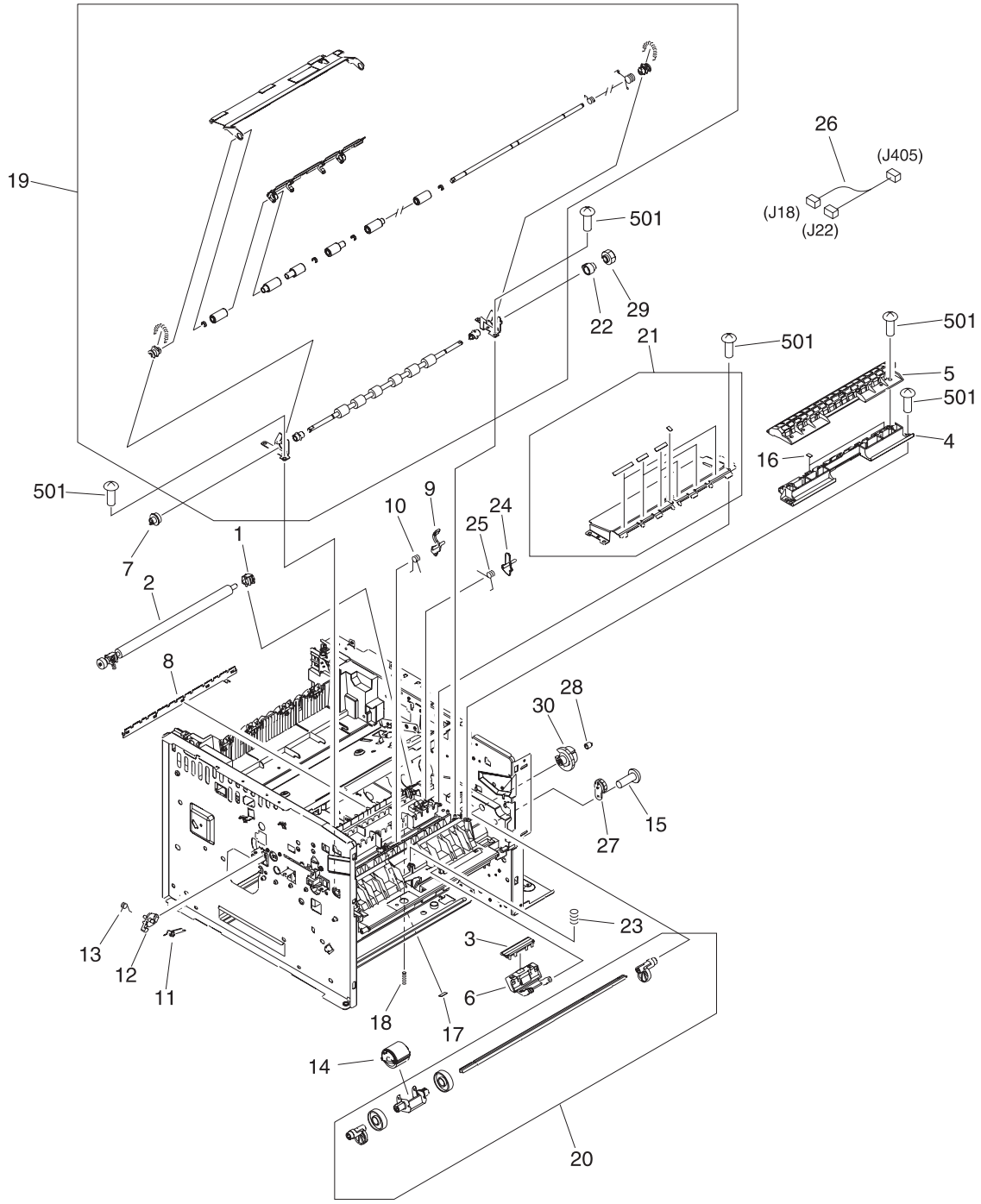


**Table 7-6 Internal components (3 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Bushing, transfer, right | RC1-0922-000CN | 1 |
| 2 | Transfer roller assembly | RM1-1508-000CN | 1 |
| 3 | Pad, separation | RC1-0939-000CN | 1 |
| 4 | Guide, feed | RC1-3935-000CN | 1 |
| 5 | Cover, registration | RC1-3936-020CN | 1 |
| 6 | Arm, pad | RC1-3937-000CN | 1 |
| 7 | Gear, 12T | RU5-0400-000CN | 1 |
| 8 | Eliminator, static charge | RC1-4025-000CN | 1 |
| 9 | Lever, sensor | RC1-4027-000CN | 1 |
| 10 | Spring, torsion | RC1-4028-000CN | 1 |
| 11 | Spring, torsion | RC1-4059-000CN | 1 |
| 12 | Lever | RC1-4060-000CN | 1 |
| 13 | Spring, torsion | RC1-4061-000CN | 1 |
| 14 | Roller, tray 1 pick-up | RL1-0568-000CN | 1 |
| 15 | Screw, D, M3x8 | XA9-1671-000CN | 1 |
| 16 | Sheet, static charge | RC1-4069-000CN | 2 |
| 17 | Sheet, static charge | RC1-4070-000CN | 1 |
| 18 | Spring, compression | RU5-2408-000CN | 1 |
| 19 | Registration assembly | RM1-3715-000CN | 1 |
| 20 | Tray 1 pickup roller assembly | RM1-3716-000CN | 1 |
| 21 | Transfer guide assembly, lower | RM1-3757-000CN | 1 |
| 22 | Stopper, gear | RC1-4189-000CN | 1 |
| 23 | Spring, compression | RU5-2385-000CN | 1 |
| 24 | Arm, width-sensor | RC2-0575-000CN | 1 |
| 25 | Spring, torsion | RC2-0576-000CN | 1 |
| 26 | Cable, delivery sensor | RM1-4057-000CN | 1 |
| 27 | Gear, 17T | RA0-1172-000CN | 1 |
| 28 | Spring compression | RC2-0483-000CN | 1 |
| 29 | Gear, 14T | RU5-0409-000CN | 1 |
| 30 | Gear, 30T | RU5-0366-000CN | 1 |
| 501 | Screw, tapping, truss head, M4x10 | XB4-7401-005CN | 9 |

**Figure 7-6** Internal components (4 of 6)

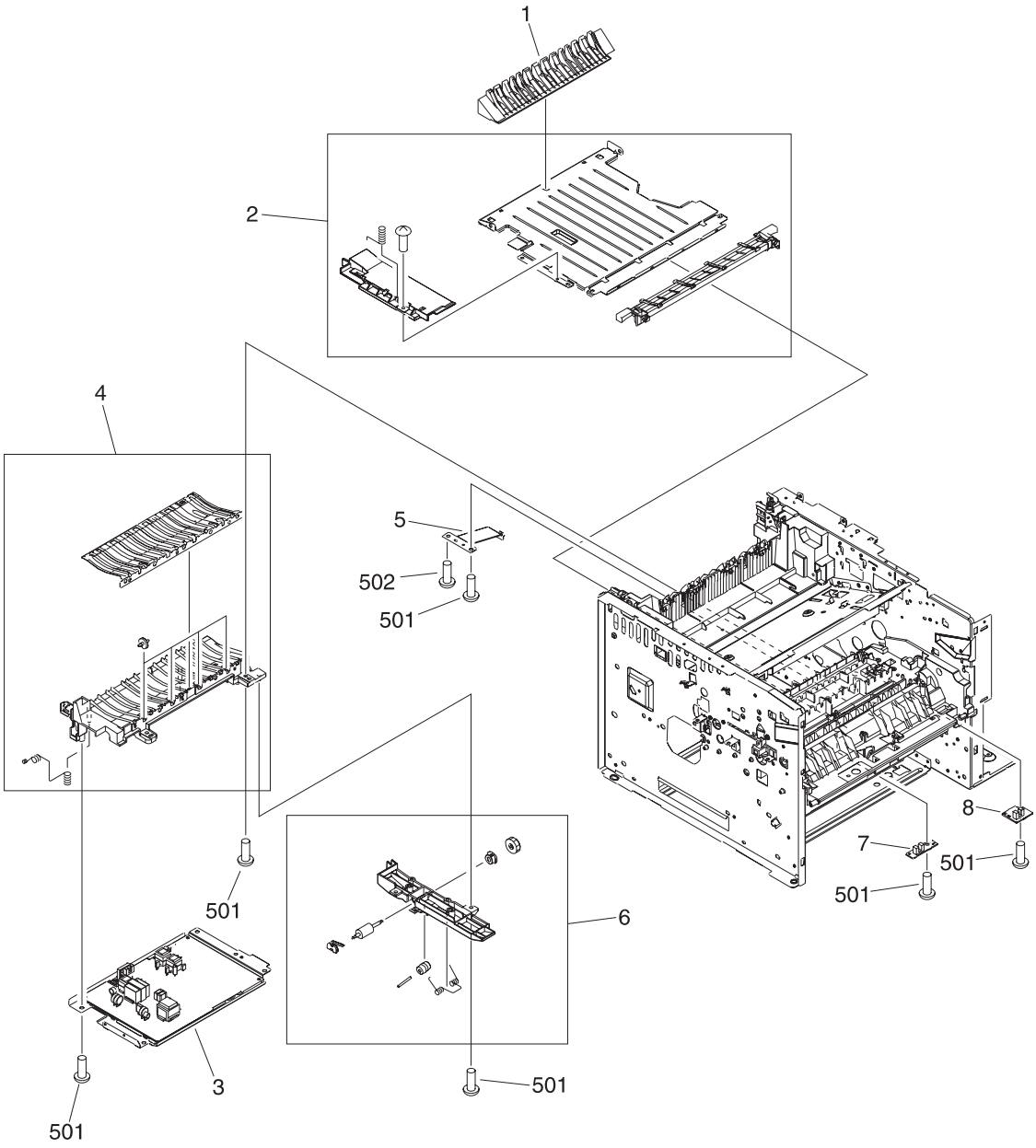


**Table 7-7 Internal components (4 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Guide, duplex inlet | RC1-4096-000CN | 1 |
| 2 | Feed assembly, lower | RM1-3759-000CN | 1 |
| 3 | High voltage power supply | RM1-3758-000CN | 1 |
| 4 | Feed guide assembly | RM1-3760-000CN | 1 |
| 5 | Plate, grounding | RC1-4085-000CN | 1 |
| 6 | Position guide assembly | RM1-1506-000CN | 1 |
| 7 | Sensor PCA, top-of-page | RM1-4040-000CN | 1 |
| 8 | Sensor PCA, width | RM1-4042-000CN | 1 |
| 501 | Screw, tapping, truss head, M4x10 | XB4-7401-005CN | 6 |
| 502 | Screw w/washer, M3x6 | XB2-7300-605CN | 1 |

**Figure 7-7** Internal components (5 of 6)

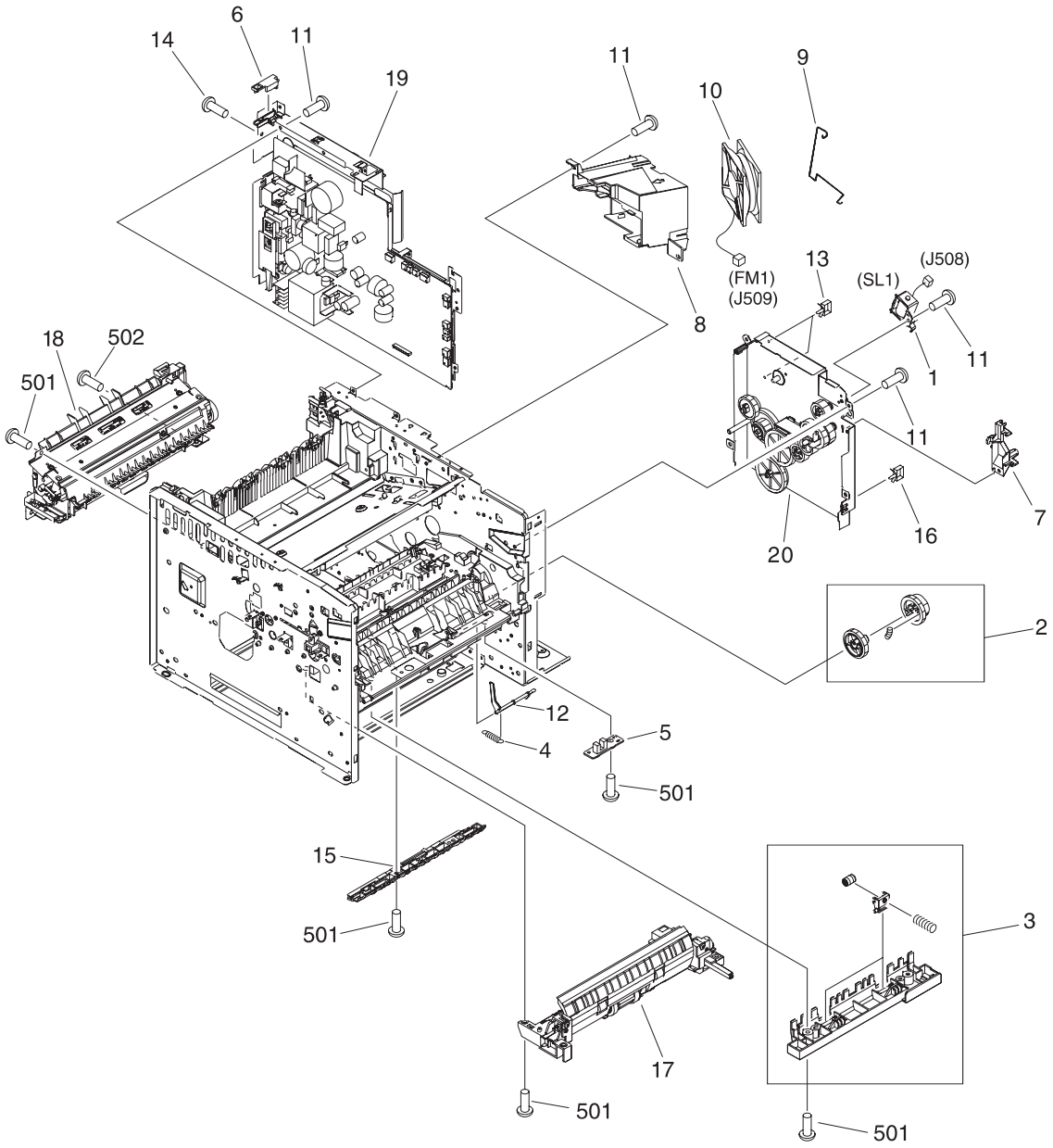


**Table 7-8 Internal components (5 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Solenoid, tray 1 | RK2-1490-000CN | 1 |
| 2 | Pick-up roller gear assembly | RM1-3714-000CN | 1 |
| 3 | Roller stay assembly | RM1-1485-000CN | 1 |
| 4 | Spring, torsion | RU5-2386-000CN | 1 |
| 5 | Sensor PCA, multipurpose | RM1-4041-000CN | 1 |
| 6 | Cover, face-up-sensor cable | RC2-0739-000CN | 1 |
| 7 | Holder, cable | RC2-0588-000CN | 1 |
| 8 | Holder, main fan | RC2-0592-000CN | 1 |
| 9 | Static wire, right-side fan | RC2-0593-000CN | 1 |
| 10 | Fan, right-side | RK2-1497-000CN | 1 |
| 11 | Screw, D, M3x8 | XA9-1671-000CN | 15 |
| 12 | Lever, sensor | RC1-3939-000CN | 1 |
| 13 | Cable guide | WT2-5694-000CN | 2 |
| 14 | Screw, tapping, M3x6 | XA9-1503-000CN | 15 |
| 15 | Guide | RC1-4083-000CN | |
| 16 | Cable guide | WT2-5678-000CN | 1 |
| 17 | Tray 2 pickup assembly (also see Tray 2 pickup assembly on page 320) | RM1-3762-000CN | 1 |
| 18 | Fuser, 110-127 V | RM1-3740-000CN | 1 |
| 18 | Fuser, 220-240 V | RM1-3741-000CN | 1 |
| 19 | ECU, 110-127 V (DC controller and low voltage power supply) | RM1-3774-000CN | 1 |
| 19 | ECU, 220-240 V (DC controller and low voltage power supply) | RM1-3775-000CN | 1 |
| 20 | Gear assembly | RM1-3712-000CN | 1 |
| 501 | Screw, tapping, truss head, M4x10 | XB4-7401-005CN | 10 |
| 502 | Screw w/washer, M3x6 | XB2-7300-605CN | 1 |

**Figure 7-8** Internal components (6 of 6)

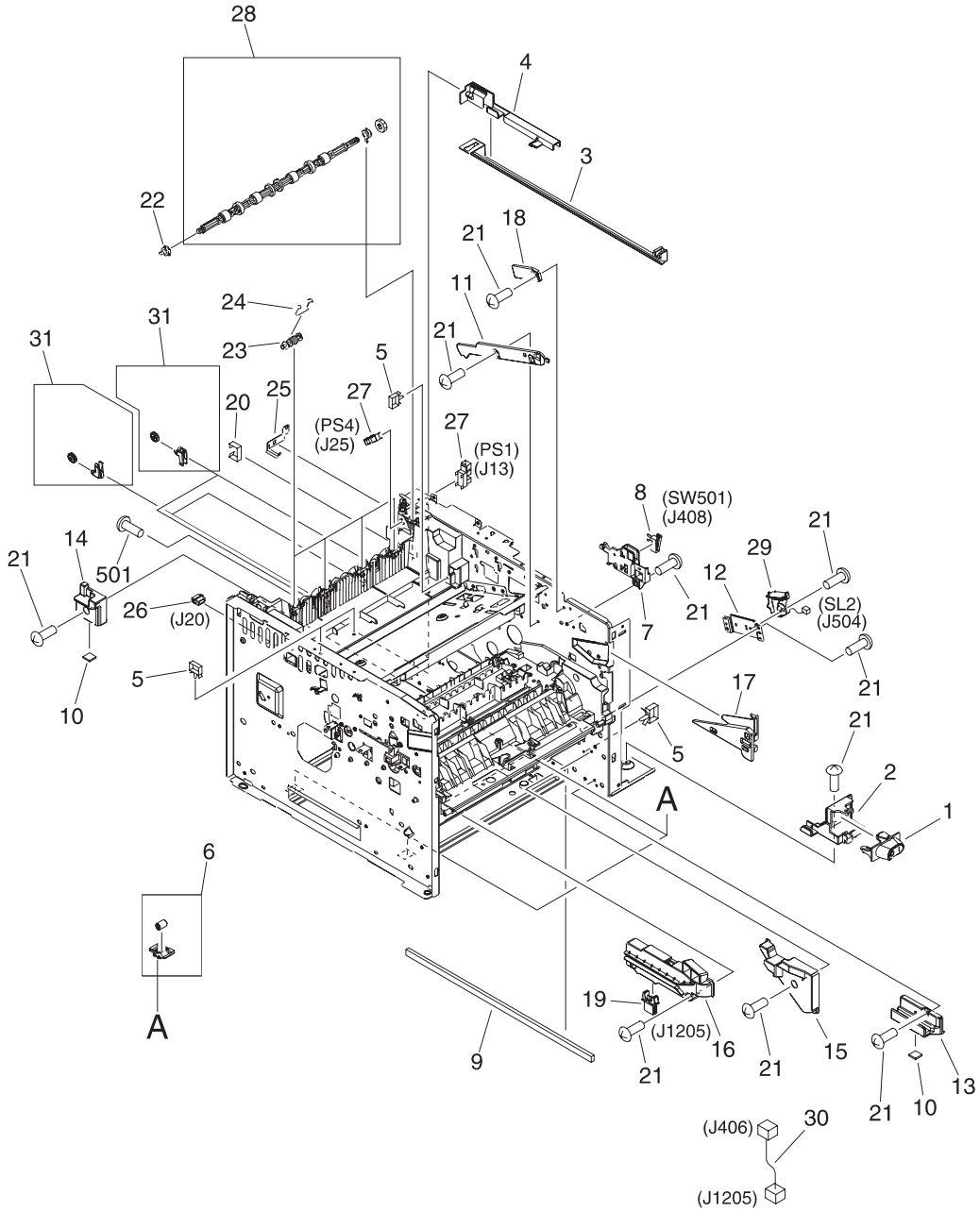


**Table 7-9 Internal components (6 of 6)**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| 1 | Power switch | RC2-0631-000CN | 1 |
| 2 | Holder, switch | RC2-0632-000CN | 1 |
| 3 | Link, switch | RC2-0633-000CN | 1 |
| 4 | Holder, switch link | RC2-0634-000CN | 1 |
| 5 | Cable guide | WT2-5678-000CN | 4 |
| 6 | Roller assembly, bottom plate | RM1-3727-000CN | 4 |
| 7 | Holder, interlock | RC2-0595-000CN | 1 |
| 8 | Microswitch | RK2-0534-000CN | 1 |
| 9 | Cushion, right lower | RC2-0468-000CN | 1 |
| 10 | Foot, rubber | RA0-1003-000CN | 2 |
| 11 | Guide, cartridge, upper-right | RC2-0492-000CN | 1 |
| 12 | Mount, solenoid | RC2-0498-000CN | 1 |
| 13 | Guide, cassette, front-right | RC2-0559-000CN | 1 |
| 14 | Guide, cassette, back-right | RC2-0560-000CN | 1 |
| 15 | Guide, center plate, right | RC2-0561-000CN | 1 |
| 16 | Holder, option connector | RC1-0562-000CN | 1 |
| 17 | Guide, cartridge, lower-right | RC2-0700-000CN | 1 |
| 18 | Stopper, cartridge, right | RC2-0702-000CN | 1 |
| 19 | Connector, drawer | VS1-7257-007CN | 1 |
| 20 | Cable guide | WT2-5056-000CN | 1 |
| 21 | Screw, D, M3x8 | XA9-1671-000CN | 14 |
| 22 | Bushing | RC1-3665-000CN | 1 |
| 23 | Roller, face-down | RC1-3994-000CN | 4 |
| 24 | Spring, torsion | RC2-0665-000CN | 4 |
| 25 | Plate, face-up shield | RC2-0697-000CN | 1 |
| 26 | Connector, snap-tight, black | VS1-7177-004CN | 1 |
| 27 | Photo-interrupter | WG8-5624-000CN | 2 |
| 28 | Roller assembly, face-down | RM1-3749-000CN | 1 |
| 29 | Solenoid | RK2-1492-000CN | 1 |
| 30 | Cable, option interface | RM1-4062-000CN | 1 |
| 31 | Roller assembly, delivery | RM1-1497-000CN | 4 |
| 501 | Screw, tapping, truss head, M4x10 | XB4-7401-005CN | 2 |

# Tray 2 pickup assembly

**Figure 7-9** Tray 2 pickup assembly

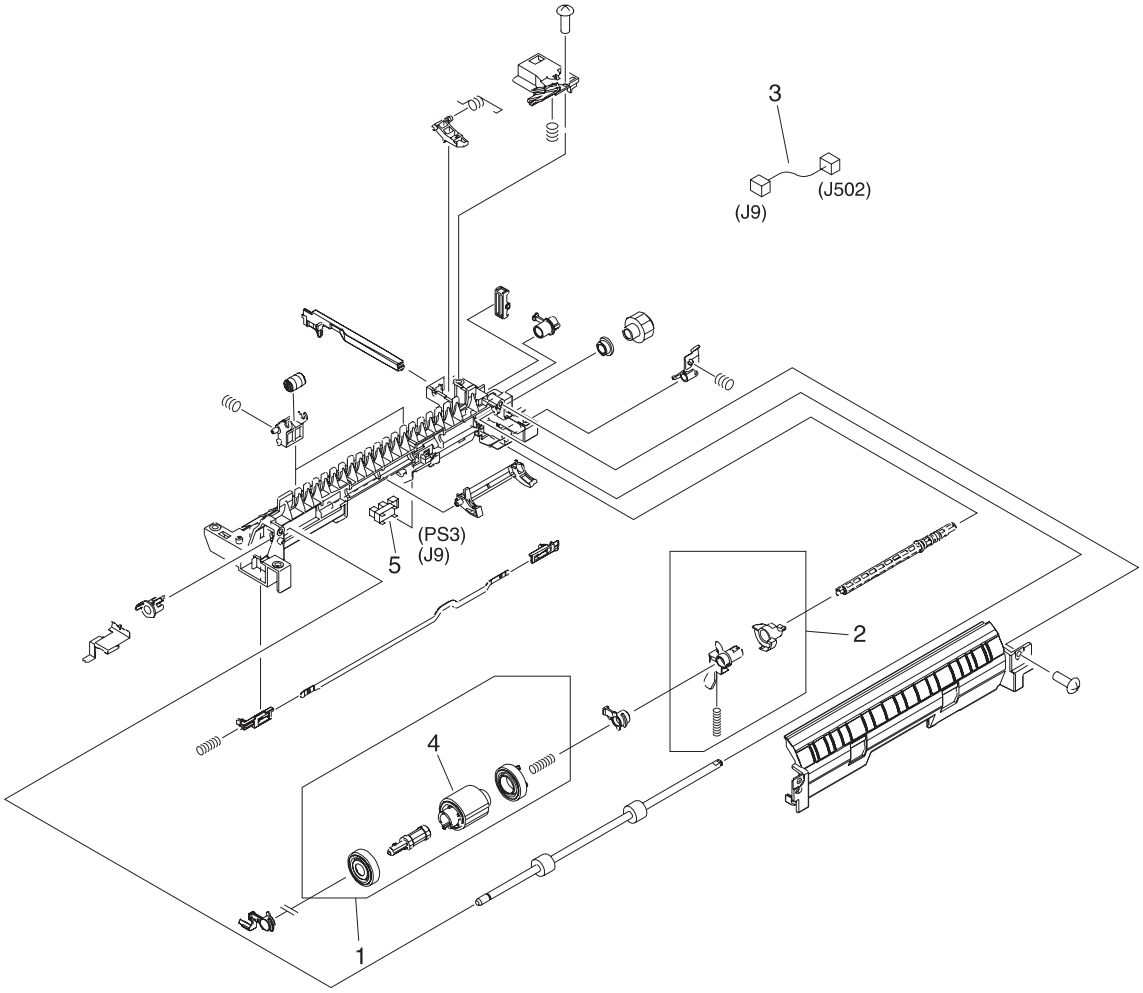


**Table 7-10 Tray 2 pickup assembly**

| Ref | Description | Part number | Qty |
|---|---|---|---|
| | Tray 2 pickup assembly | RM1-3762-000CN | 1 |
| 1 | Pickup roller assembly, tray 2 | RM1-3763-000CN | 1 |
| 2 | Sensor flag assembly, tray 2 | RM1-3769-000CN | 1 |
| 3 | Cable, sensor, tray 2 | RM1-4060-000CN | 1 |
| 4 | Pickup roller, tray 2 | RL1-1370-000CN | 1 |
| 5 | Photo-interrupter, tray 2 | WG8-5624-000CN | 1 |

# Alphabetical parts list

**Table 7-11 Alphabetical parts list**

| Description | Part number | Table and page |
|---|---|---|
| ADF assembly without Scanner | CB414-67916 | ADF/scanner assembly on page 303 |
| ADF feed roller kit | CB414–67904 | ADF/scanner assembly on page 303 |
| Arm, door | RC1-4055-000CN | Internal components (1 of 6) on page 307 |
| Arm, pad | RC1-3937-000CN | Internal components (3 of 6) on page 313 |
| Arm, width-sensor | RC2-0575-000CN | Internal components (3 of 6) on page 313 |
| Bushing | RC1-3665-000CN | Internal components (6 of 6) on page 319 |
| Bushing, inner | RC2-0701-000CN | Internal components (2 of 6) on page 311 |
| Bushing, transfer, right | RC1-0922-000CN | Internal components (3 of 6) on page 313 |
| Cable assembly | RM1-4053-000CN | Internal components (1 of 6) on page 307 |
| Cable guide | WT2-5694-000CN | Internal components (5 of 6) on page 317 |
| Cable guide | WT2-5678-000CN | Internal components (5 of 6) on page 317 |
| Cable guide | WT2-5678-000CN | Internal components (6 of 6) on page 319 |
| Cable guide | WT2-5056-000CN | Internal components (6 of 6) on page 319 |
| Cable, delivery sensor | RM1-4057-000CN | Internal components (3 of 6) on page 313 |
| Cable, memory tag | RM1-4054-000CN | Internal components (1 of 6) on page 307 |
| Cable, option interface | RM1-4062-000CN | Internal components (6 of 6) on page 319 |
| Cable, sensor, tray 2 | RM1-4060-000CN | Tray 2 pickup assembly on page 321 |
| Cam | RC1-4114-000CN | Internal components (2 of 6) on page 311 |
| Cam, contact | RC1-4137-020CN | Internal components (1 of 6) on page 307 |
| Cartridge door assembly | RM1-3722-000CN | Covers on page 305 |
| Clip clamp, wire | WT2-5694-000CN | Internal components (1 of 6) on page 307 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Clip, cable | WT2-5812-000CN | Internal components (1 of 6) on page 307 |
| Clip, cable | WT2-5056-000CN | Internal components (1 of 6) on page 307 |
| Connector, drawer | VS1-7257-007CN | Internal components (6 of 6) on page 319 |
| Connector, snap-tight, black | VS1-7177-003CN | Internal components (1 of 6) on page 307 |
| Connector, snap-tight, black | VS1-7177-004CN | Internal components (6 of 6) on page 319 |
| Control panel | CB414-60101 | ADF/scanner assembly on page 303 |
| Cover (replaces the stapler door for devices without staplers) | RC2-0727-000CN | Covers on page 305 |
| Cover, ADF | CB414-67902 | ADF/scanner assembly on page 303 |
| Cover, face-up-sensor cable | RC2-0739-000CN | Internal components (5 of 6) on page 317 |
| Cover, fax | RC2-0726-000CN | Covers on page 305 |
| Cover, fax internal (fax rail) | RC2-0729-000CN | Covers on page 305 |
| Cover, gear | RC2-0579-000CN | Internal components (2 of 6) on page 311 |
| Cover, I/O | RC2-0612-000CN | Covers on page 305 |
| Cover, left | RM1-3773-000CN | Covers on page 305 |
| Cover, legal | RL1-1366-000CN | Covers on page 305 |
| Cover, main motor | RC1-4108-000CN | Internal components (2 of 6) on page 311 |
| Cover, registration | RC1-3936-020CN | Internal components (3 of 6) on page 313 |
| Cover, right front | RL1-1723-000CN | Covers on page 305 |
| Cover, right lower | RC2-0603-000CN | Covers on page 305 |
| Cover, right-side (DIMM cover) | RC2-0722-000CN | Covers on page 305 |
| Cover, stapler | RM1-3790-000CN | Covers on page 305 |
| Cushion, right lower | RC2-0468-000CN | Internal components (6 of 6) on page 319 |
| Drive release assembly | RM1-1522-000CN | Internal components (2 of 6) on page 311 |
| Duct, cartridge | RC2-0590-000CN | Internal components (2 of 6) on page 311 |
| Duct, scanner | RC1-4128-020CN | Internal components (1 of 6) on page 307 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| E-ring | XD2-1100-402CN | Internal components (2 of 6) on page 311 |
| ECU, 110-127 V (DC controller and low voltage power supply) | RM1-3774-000CN | Internal components (5 of 6) on page 317 |
| ECU, 220-240 V (DC controller and low voltage power supply) | RM1-3775-000CN | Internal components (5 of 6) on page 317 |
| Eliminator, static charge | RC1-4025-000CN | Internal components (3 of 6) on page 313 |
| Fan, left-side | RK2-1499-000CN | Internal components (1 of 6) on page 307 |
| Fan, right-side | RK2-1497-000CN | Internal components (5 of 6) on page 317 |
| Fax card PCA (see Fax accessory on page 130) | Q3701-60012 | Internal components (1 of 6) on page 307 |
| Fax power cable (formatter to fax) (see Fax accessory on page 130) | 5851-2503 | Internal components (1 of 6) on page 307 |
| Fax sheet metal assembly | CB414-60148 | Internal components (1 of 6) on page 307 |
| Feed assembly, lower | RM1-3759-000CN | Internal components (4 of 6) on page 315 |
| Feed guide assembly | RM1-3760-000CN | Internal components (4 of 6) on page 315 |
| Film, fuser drive side plate | RC2-0649-000CN | Internal components (2 of 6) on page 311 |
| Fixing drive side plate assembly | RM1-3746-000CN | Internal components (2 of 6) on page 311 |
| Flag assembly, face-down | RM1-3743-000CN | Covers on page 305 |
| Flag assembly, full detect | RM1-3742-000CN | Covers on page 305 |
| Foot, rubber | RA0-1003-000CN | Internal components (1 of 6) on page 307 |
| Foot, rubber | RA0-1003-000CN | Internal components (6 of 6) on page 319 |
| Formatter PCA (see Formatter on page 135) | Q7819-60001 | Internal components (1 of 6) on page 307 |
| Fuser, 110-127 V | RM1-3740-000CN | Internal components (5 of 6) on page 317 |
| Fuser, 220-240 V | RM1-3741-000CN | Internal components (5 of 6) on page 317 |
| Gear assembly | RM1-3712-000CN | Internal components (5 of 6) on page 317 |
| Gear, 12T | RU5-0394-000CN | Internal components (2 of 6) on page 311 |
| Gear, 12T | RU5-0400-000CN | Internal components (3 of 6) on page 313 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Gear, 14T | RU5-0409-000CN | Internal components (3 of 6) on page 313 |
| Gear, 16T | RU5-0951-000CN | Internal components (2 of 6) on page 311 |
| Gear, 17T | RA0-1172-000CN | Internal components (3 of 6) on page 313 |
| Gear, 17T/17T | RU5-0958-000CN | Internal components (2 of 6) on page 311 |
| Gear, 19T | RU5-0959-000CN | Internal components (2 of 6) on page 311 |
| Gear, 201t | RU5-0950-000CN | Internal components (2 of 6) on page 311 |
| Gear, 20T | RU5-0957-000CN | Internal components (2 of 6) on page 311 |
| Gear, 20T/20T | RU5-0956-000CN | Internal components (2 of 6) on page 311 |
| Gear, 30T | RU5-0366-000CN | Internal components (3 of 6) on page 313 |
| Gear, 31T | RU5-0960-000CN | Internal components (2 of 6) on page 311 |
| Gear, 43T | RU5-0955-000CN | Internal components (2 of 6) on page 311 |
| Gear, 65T | RU5-0962-000CN | Internal components (2 of 6) on page 311 |
| Guide | RC1-4083-000CN | Internal components (5 of 6) on page 317 |
| Guide, air | RC2-0648-000CN | Internal components (2 of 6) on page 311 |
| Guide, cartridge, left lower | RC2-0704-000CN | Internal components (1 of 6) on page 307 |
| Guide, cartridge, left upper | RC2-0703-000CN | Internal components (1 of 6) on page 307 |
| Guide, cartridge, lower-right | RC2-0700-000CN | Internal components (6 of 6) on page 319 |
| Guide, cartridge, upper-right | RC2-0492-000CN | Internal components (6 of 6) on page 319 |
| Guide, cassette, back-right | RC2-0560-000CN | Internal components (6 of 6) on page 319 |
| Guide, cassette, front-right | RC2-0559-000CN | Internal components (6 of 6) on page 319 |
| Guide, cassette, left front | RC2-0565-000CN | Internal components (1 of 6) on page 307 |
| Guide, cassette, left rear | RC2-0566-000CN | Internal components (1 of 6) on page 307 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Guide, center plate, left | RC2-0567-000CN | Internal components (1 of 6) on page 307 |
| Guide, center plate, right | RC2-0561-000CN | Internal components (6 of 6) on page 319 |
| Guide, door arm | RC1-4056-000CN | Internal components (1 of 6) on page 307 |
| Guide, duplex inlet | RC1-4096-000CN | Internal components (4 of 6) on page 315 |
| Guide, feed | RC1-3935-000CN | Internal components (3 of 6) on page 313 |
| Hard disk drive (see Disk drive on page 132) | 0950-4753 | Internal components (1 of 6) on page 307 |
| Hard disk drive assembly | CB414-69001 | Internal components (1 of 6) on page 307 |
| Hard disk drive data cable (see Disk drive on page 132) | 5851-2808 | Internal components (1 of 6) on page 307 |
| Hard disk drive power cable (see Disk drive on page 132) | 5851-2809 | Internal components (1 of 6) on page 307 |
| Hard disk drive sheet metal assembly | CB414-60156 | Internal components (1 of 6) on page 307 |
| High voltage power supply | RM1-3758-000CN | Internal components (4 of 6) on page 315 |
| Hinge, left | RC1-4057-000CN | Covers on page 305 |
| Hinge, right | RC1-4058-000CN | Covers on page 305 |
| Holder | RC1-4009-000CN | Internal components (1 of 6) on page 307 |
| Holder, cable | RC2-0588-000CN | Internal components (5 of 6) on page 317 |
| Holder, interlock | RC2-0595-000CN | Internal components (6 of 6) on page 319 |
| Holder, main fan | RC2-0592-000CN | Internal components (5 of 6) on page 317 |
| Holder, option connector | RC1-0562-000CN | Internal components (6 of 6) on page 319 |
| Holder, sub fan | RC2-0622-000CN | Internal components (1 of 6) on page 307 |
| Holder, switch | RC2-0632-000CN | Internal components (6 of 6) on page 319 |
| Holder, switch link | RC2-0634-000CN | Internal components (6 of 6) on page 319 |
| Holder, tag | RC1-4127-000CN | Internal components (1 of 6) on page 307 |
| Input tray, ADF | CB414-67903 | ADF/scanner assembly on page 303 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Laser/scanner assembly | RM1-1521-030CN | Internal components (1 of 6) on page 307 |
| Legal-size ADF assembly without scanner | CC476-67909 | ADF/scanner assembly on page 303 |
| Legal-size scanner assembly without ADF | CC476-67910 | ADF/scanner assembly on page 303 |
| Lever | RC1-4060-000CN | Internal components (3 of 6) on page 313 |
| Lever, cartridge clamp | RC2-0706-000CN | Internal components (1 of 6) on page 307 |
| Lever, coupling | RC1-4115-000CN | Internal components (2 of 6) on page 311 |
| Lever, drive release | RC2-0705-000CN | Internal components (1 of 6) on page 307 |
| Lever, drive release | RC1-4116-000CN | Internal components (2 of 6) on page 311 |
| Lever, grounding contact | RC1-4065-000CN | Internal components (1 of 6) on page 307 |
| Lever, grounding contact | RC1-4066-020CN | Internal components (1 of 6) on page 307 |
| Lever, sensor | RC1-4027-000CN | Internal components (3 of 6) on page 313 |
| Lever, sensor | RC1-3939-000CN | Internal components (5 of 6) on page 317 |
| Link, drive release | RC1-4117-000CN | Internal components (2 of 6) on page 311 |
| Link, laser shutter | RC1-4125-000CN | Internal components (1 of 6) on page 307 |
| Link, switch | RC2-0633-000CN | Internal components (6 of 6) on page 319 |
| Microswitch | RK2-0534-000CN | Internal components (6 of 6) on page 319 |
| Motor, dc, 26.2 W | RK2-1488-000CN | Internal components (2 of 6) on page 311 |
| Motor, stepping | RK2-1489-000CN | Internal components (2 of 6) on page 311 |
| Mount, solenoid | RC2-0498-000CN | Internal components (6 of 6) on page 319 |
| Pad, separation | RC1-0939-000CN | Internal components (3 of 6) on page 313 |
| Paper clip tray | RC2-0724-000CN | Covers on page 305 |
| Pendulum assembly | RM1-3748-000CN | Internal components (2 of 6) on page 311 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Photo-interrupter | WG8-5624-000CN | Internal components (6 of 6) on page 319 |
| Photo-interrupter, tray 2 | WG8-5624-000CN | Tray 2 pickup assembly on page 321 |
| Pick-up roller gear assembly | RM1-3714-000CN | Internal components (5 of 6) on page 317 |
| Pickup roller assembly, tray 2 | RM1-3763-000CN | Tray 2 pickup assembly on page 321 |
| Pickup roller, tray 2 | RL1-1370-000CN | Tray 2 pickup assembly on page 321 |
| Plate, face-up shield | RC2-0697-000CN | Internal components (6 of 6) on page 319 |
| Plate, fan shield, left | RC2-0623-000CN | Internal components (1 of 6) on page 307 |
| Plate, grounding | RC1-4085-000CN | Internal components (4 of 6) on page 315 |
| Plate, I/O | RC2-0736-000CN | Internal components (1 of 6) on page 307 |
| Plate, Long I/O | CB414-60150 | Internal components (1 of 6) on page 307 |
| Plate, protective | RC1-4136-000CN | Internal components (1 of 6) on page 307 |
| Position guide assembly | RM1-1506-000CN | Internal components (4 of 6) on page 315 |
| Power switch | RC2-0631-000CN | Internal components (6 of 6) on page 319 |
| Power-supply, stapler (see Stapler on page 136) | Q7429-69501 | Internal components (1 of 6) on page 307 |
| Rear cover assembly | RM1-3724-000CN | Covers on page 305 |
| Registration assembly | RM1-3715-000CN | Internal components (3 of 6) on page 313 |
| Roller assembly, bottom plate | RM1-3727-000CN | Internal components (6 of 6) on page 319 |
| Roller assembly, delivery | RM1-1497-000CN | Internal components (6 of 6) on page 319 |
| Roller assembly, face-down | RM1-3749-000CN | Internal components (6 of 6) on page 319 |
| Roller stay assembly | RM1-1485-000CN | Internal components (5 of 6) on page 317 |
| Roller, face-down | RC1-3994-000CN | Internal components (6 of 6) on page 319 |
| Roller, tray 1 pick-up | RL1-0568-000CN | Internal components (3 of 6) on page 313 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Scanner assembly without ADF | CB414-67905 | ADF/scanner assembly on page 303 |
| Screw w/washer, M3x6 | XB2-7300-605CN | Internal components (4 of 6) on page 315 |
| Screw w/washer, M3x6 | XB2-7300-605CN | Internal components (5 of 6) on page 317 |
| Screw, D, M3x8 | XA9-1671-000CN | Internal components (1 of 6) on page 307 |
| Screw, D, M3x8 | XA9-1671-000CN | Internal components (2 of 6) on page 311 |
| Screw, D, M3x8 | XA9-1671-000CN | Internal components (3 of 6) on page 313 |
| Screw, D, M3x8 | XA9-1671-000CN | Internal components (5 of 6) on page 317 |
| Screw, D, M3x8 | XA9-1671-000CN | Internal components (6 of 6) on page 319 |
| Screw, RS, M3x8 | XA9-1500-000CN | Internal components (2 of 6) on page 311 |
| Screw, tapping, M3x6 | XA9-1503-000CN | Internal components (5 of 6) on page 317 |
| Screw, tapping, truss head, M4x10 | XB4-7401-005CN | Internal components (3 of 6) on page 313 |
| Screw, tapping, truss head, M4x10 | XB4-7401-005CN | Internal components (4 of 6) on page 315 |
| Screw, tapping, truss head, M4x10 | XB4-7401-005CN | Internal components (5 of 6) on page 317 |
| Screw, tapping, truss head, M4x10 | XB4-7401-005CN | Internal components (6 of 6) on page 319 |
| Sensor flag assembly, tray 2 | RM1-3769-000CN | Tray 2 pickup assembly on page 321 |
| Sensor PCA, multipurpose | RM1-4041-000CN | Internal components (5 of 6) on page 317 |
| Sensor PCA, top-of-page | RM1-4040-000CN | Internal components (4 of 6) on page 315 |
| Sensor PCA, width | RM1-4042-000CN | Internal components (4 of 6) on page 315 |
| Sheet, static charge | RC1-4069-000CN | Internal components (3 of 6) on page 313 |
| Sheet, static charge | RC1-4070-000CN | Internal components (3 of 6) on page 313 |
| Solenoid | RK2-1492-000CN | Internal components (6 of 6) on page 319 |
| Solenoid, tray 1 | RK2-1490-000CN | Internal components (5 of 6) on page 317 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Spring compression | RC2-0483-000CN | Internal components (3 of 6) on page 313 |
| Spring, compression | RU5-2404-000CN | Internal components (1 of 6) on page 307 |
| Spring, compression | RU5-2405-000CN | Internal components (1 of 6) on page 307 |
| Spring, compression | RC1-4140-000CN | Internal components (1 of 6) on page 307 |
| Spring, compression | RU5-2401-000CN | Internal components (2 of 6) on page 311 |
| Spring, compression | RU5-2920-000CN | Internal components (2 of 6) on page 311 |
| Spring, compression | RU5-2408-000CN | Internal components (3 of 6) on page 313 |
| Spring, compression | RU5-2385-000CN | Internal components (3 of 6) on page 313 |
| Spring, leaf | RC1-4067-000CN | Internal components (1 of 6) on page 307 |
| Spring, tension | RU5-2388-000CN | Covers on page 305 |
| Spring, tension | RU5-2407-000CN | Internal components (1 of 6) on page 307 |
| Spring, tension | RU5-2403-000CN | Internal components (1 of 6) on page 307 |
| Spring, torsion | RU5-2410-020CN | Internal components (1 of 6) on page 307 |
| Spring, torsion | RC1-4028-000CN | Internal components (3 of 6) on page 313 |
| Spring, torsion | RC1-4059-000CN | Internal components (3 of 6) on page 313 |
| Spring, torsion | RC1-4061-000CN | Internal components (3 of 6) on page 313 |
| Spring, torsion | RC2-0576-000CN | Internal components (3 of 6) on page 313 |
| Spring, torsion | RU5-2386-000CN | Internal components (5 of 6) on page 317 |
| Spring, torsion | RC2-0665-000CN | Internal components (6 of 6) on page 319 |
| Stapler (see Stapler on page 136) | CB414-60187 | Internal components (1 of 6) on page 307 |
| Stapler assembly (bracket and stapler) (see Stapler on page 136) | CB414-67917 | Internal components (1 of 6) on page 307 |
| Stapler door (for devices with staplers) | CB414-40064 | Covers on page 305 |
| Static wire, right-side fan | RC2-0593-000CN | Internal components (5 of 6) on page 317 |

**Table 7-11 Alphabetical parts list (continued)**

| Description | Part number | Table and page |
|---|---|---|
| Stay, tag holder | RC1-4126-000CN | Internal components (1 of 6) on page 307 |
| Stopper, cartridge, left | RC2-0707-000CN | Internal components (1 of 6) on page 307 |
| Stopper, cartridge, right | RC2-0702-000CN | Internal components (6 of 6) on page 319 |
| Stopper, feed guide, left | RC2-0585-000CN | Internal components (1 of 6) on page 307 |
| Stopper, fuser | RC2-0657-000CN | Internal components (2 of 6) on page 311 |
| Stopper, gear | RC1-4189-000CN | Internal components (3 of 6) on page 313 |
| Top cover assembly | RM1-3772-000CN | Covers on page 305 |
| Transfer guide assembly, lower | RM1-3757-000CN | Internal components (3 of 6) on page 313 |
| Transfer roller assembly | RM1-1508-000CN | Internal components (3 of 6) on page 313 |
| Tray, staple | RC2-0725-000CN | Internal components (1 of 6) on page 307 |
| Tray 1 assembly | RM1-1490-000CN | Covers on page 305 |
| Tray 1 cover assembly | RM1-3723-000CN | Covers on page 305 |
| Tray 1 pickup roller assembly | RM1-3716-000CN | Internal components (3 of 6) on page 313 |
| Tray 2 pickup assembly | RM1-3762-000CN | Tray 2 pickup assembly on page 321 |
| Tray 2 pickup assembly (also see Tray 2 pickup assembly on page 320) | RM1-3762-000CN | Internal components (5 of 6) on page 317 |
| Washer | RC2-0652-000CN | Internal components (2 of 6) on page 311 |

# Numerical parts list

**Table 7-12 Numerical parts list**

| Part number | Description | Table and page |
|---|---|---|
| 0950-4753 | Hard disk drive (see Disk drive on page 132) | Internal components (1 of 6) on page 307 |
| 5851-2503 | Fax power cable (formatter to fax) (see Fax accessory on page 130) | Internal components (1 of 6) on page 307 |
| 5851-2808 | Hard disk drive data cable (see Disk drive on page 132) | Internal components (1 of 6) on page 307 |
| 5851-2809 | Hard disk drive power cable (see Disk drive on page 132) | Internal components (1 of 6) on page 307 |
| CB414-40064 | Stapler door (for devices with staplers) | Covers on page 305 |
| CB414-60101 | Control panel | ADF/scanner assembly on page 303 |
| CB414-60148 | Fax sheet metal assembly | Internal components (1 of 6) on page 307 |
| CB414-60150 | Plate, Long I/O | Internal components (1 of 6) on page 307 |
| CB414-60156 | Hard disk drive sheet metal assembly | Internal components (1 of 6) on page 307 |
| CB414-60187 | Stapler (see Stapler on page 136) | Internal components (1 of 6) on page 307 |
| CB414-67902 | Cover, ADF | ADF/scanner assembly on page 303 |
| CB414-67903 | Input tray, ADF | ADF/scanner assembly on page 303 |
| CB414-67905 | Scanner assembly without ADF | ADF/scanner assembly on page 303 |
| CB414-67916 | ADF assembly without Scanner | ADF/scanner assembly on page 303 |
| CB414-67917 | Stapler assembly (bracket and stapler) (see Stapler on page 136) | Internal components (1 of 6) on page 307 |
| CB414-69001 | Hard disk drive assembly | Internal components (1 of 6) on page 307 |
| CB414–67904 | ADF feed roller kit | ADF/scanner assembly on page 303 |
| CC476-67909 | Legal-size ADF assembly without scanner | ADF/scanner assembly on page 303 |
| CC476-67910 | Legal-size scanner assembly without ADF | ADF/scanner assembly on page 303 |
| Q3701-60012 | Fax card PCA (see Fax accessory on page 130) | Internal components (1 of 6) on page 307 |
| Q7429-69501 | Power-supply, stapler (see Stapler on page 136) | Internal components (1 of 6) on page 307 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| Q7819-60001 | Formatter PCA (see Formatter on page 135) | Internal components (1 of 6) on page 307 |
| RA0-1003-000CN | Foot, rubber | Internal components (1 of 6) on page 307 |
| RA0-1003-000CN | Foot, rubber | Internal components (6 of 6) on page 319 |
| RA0-1172-000CN | Gear, 17T | Internal components (3 of 6) on page 313 |
| RC1-0562-000CN | Holder, option connector | Internal components (6 of 6) on page 319 |
| RC1-0922-000CN | Bushing, transfer, right | Internal components (3 of 6) on page 313 |
| RC1-0939-000CN | Pad, separation | Internal components (3 of 6) on page 313 |
| RC1-3665-000CN | Bushing | Internal components (6 of 6) on page 319 |
| RC1-3935-000CN | Guide, feed | Internal components (3 of 6) on page 313 |
| RC1-3936-020CN | Cover, registration | Internal components (3 of 6) on page 313 |
| RC1-3937-000CN | Arm, pad | Internal components (3 of 6) on page 313 |
| RC1-3939-000CN | Lever, sensor | Internal components (5 of 6) on page 317 |
| RC1-3994-000CN | Roller, face-down | Internal components (6 of 6) on page 319 |
| RC1-4009-000CN | Holder | Internal components (1 of 6) on page 307 |
| RC1-4025-000CN | Eliminator, static charge | Internal components (3 of 6) on page 313 |
| RC1-4027-000CN | Lever, sensor | Internal components (3 of 6) on page 313 |
| RC1-4028-000CN | Spring, torsion | Internal components (3 of 6) on page 313 |
| RC1-4055-000CN | Arm, door | Internal components (1 of 6) on page 307 |
| RC1-4056-000CN | Guide, door arm | Internal components (1 of 6) on page 307 |
| RC1-4057-000CN | Hinge, left | Covers on page 305 |
| RC1-4058-000CN | Hinge, right | Covers on page 305 |
| RC1-4059-000CN | Spring, torsion | Internal components (3 of 6) on page 313 |
| RC1-4060-000CN | Lever | Internal components (3 of 6) on page 313 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RC1-4061-000CN | Spring, torsion | Internal components (3 of 6) on page 313 |
| RC1-4065-000CN | Lever, grounding contact | Internal components (1 of 6) on page 307 |
| RC1-4066-020CN | Lever, grounding contact | Internal components (1 of 6) on page 307 |
| RC1-4067-000CN | Spring, leaf | Internal components (1 of 6) on page 307 |
| RC1-4069-000CN | Sheet, static charge | Internal components (3 of 6) on page 313 |
| RC1-4070-000CN | Sheet, static charge | Internal components (3 of 6) on page 313 |
| RC1-4083-000CN | Guide | Internal components (5 of 6) on page 317 |
| RC1-4085-000CN | Plate, grounding | Internal components (4 of 6) on page 315 |
| RC1-4096-000CN | Guide, duplex inlet | Internal components (4 of 6) on page 315 |
| RC1-4108-000CN | Cover, main motor | Internal components (2 of 6) on page 311 |
| RC1-4114-000CN | Cam | Internal components (2 of 6) on page 311 |
| RC1-4115-000CN | Lever, coupling | Internal components (2 of 6) on page 311 |
| RC1-4116-000CN | Lever, drive release | Internal components (2 of 6) on page 311 |
| RC1-4117-000CN | Link, drive release | Internal components (2 of 6) on page 311 |
| RC1-4125-000CN | Link, laser shutter | Internal components (1 of 6) on page 307 |
| RC1-4126-000CN | Stay, tag holder | Internal components (1 of 6) on page 307 |
| RC1-4127-000CN | Holder, tag | Internal components (1 of 6) on page 307 |
| RC1-4128-020CN | Duct, scanner | Internal components (1 of 6) on page 307 |
| RC1-4136-000CN | Plate, protective | Internal components (1 of 6) on page 307 |
| RC1-4137-020CN | Cam, contact | Internal components (1 of 6) on page 307 |
| RC1-4140-000CN | Spring, compression | Internal components (1 of 6) on page 307 |
| RC1-4189-000CN | Stopper, gear | Internal components (3 of 6) on page 313 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RC2-0468-000CN | Cushion, right lower | Internal components (6 of 6) on page 319 |
| RC2-0483-000CN | Spring compression | Internal components (3 of 6) on page 313 |
| RC2-0492-000CN | Guide, cartridge, upper-right | Internal components (6 of 6) on page 319 |
| RC2-0498-000CN | Mount, solenoid | Internal components (6 of 6) on page 319 |
| RC2-0559-000CN | Guide, cassette, front-right | Internal components (6 of 6) on page 319 |
| RC2-0560-000CN | Guide, cassette, back-right | Internal components (6 of 6) on page 319 |
| RC2-0561-000CN | Guide, center plate, right | Internal components (6 of 6) on page 319 |
| RC2-0565-000CN | Guide, cassette, left front | Internal components (1 of 6) on page 307 |
| RC2-0566-000CN | Guide, cassette, left rear | Internal components (1 of 6) on page 307 |
| RC2-0567-000CN | Guide, center plate, left | Internal components (1 of 6) on page 307 |
| RC2-0575-000CN | Arm, width-sensor | Internal components (3 of 6) on page 313 |
| RC2-0576-000CN | Spring, torsion | Internal components (3 of 6) on page 313 |
| RC2-0579-000CN | Cover, gear | Internal components (2 of 6) on page 311 |
| RC2-0585-000CN | Stopper, feed guide, left | Internal components (1 of 6) on page 307 |
| RC2-0588-000CN | Holder, cable | Internal components (5 of 6) on page 317 |
| RC2-0590-000CN | Duct, cartridge | Internal components (2 of 6) on page 311 |
| RC2-0592-000CN | Holder, main fan | Internal components (5 of 6) on page 317 |
| RC2-0593-000CN | Static wire, right-side fan | Internal components (5 of 6) on page 317 |
| RC2-0595-000CN | Holder, interlock | Internal components (6 of 6) on page 319 |
| RC2-0603-000CN | Cover, right lower | Covers on page 305 |
| RC2-0612-000CN | Cover, I/O | Covers on page 305 |
| RC2-0622-000CN | Holder, sub fan | Internal components (1 of 6) on page 307 |
| RC2-0623-000CN | Plate, fan shield, left | Internal components (1 of 6) on page 307 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RC2-0631-000CN | Power switch | Internal components (6 of 6) on page 319 |
| RC2-0632-000CN | Holder, switch | Internal components (6 of 6) on page 319 |
| RC2-0633-000CN | Link, switch | Internal components (6 of 6) on page 319 |
| RC2-0634-000CN | Holder, switch link | Internal components (6 of 6) on page 319 |
| RC2-0648-000CN | Guide, air | Internal components (2 of 6) on page 311 |
| RC2-0649-000CN | Film, fuser drive side plate | Internal components (2 of 6) on page 311 |
| RC2-0652-000CN | Washer | Internal components (2 of 6) on page 311 |
| RC2-0657-000CN | Stopper, fuser | Internal components (2 of 6) on page 311 |
| RC2-0665-000CN | Spring, torsion | Internal components (6 of 6) on page 319 |
| RC2-0697-000CN | Plate, face-up shield | Internal components (6 of 6) on page 319 |
| RC2-0700-000CN | Guide, cartridge, lower-right | Internal components (6 of 6) on page 319 |
| RC2-0701-000CN | Bushing, inner | Internal components (2 of 6) on page 311 |
| RC2-0702-000CN | Stopper, cartridge, right | Internal components (6 of 6) on page 319 |
| RC2-0703-000CN | Guide, cartridge, left upper | Internal components (1 of 6) on page 307 |
| RC2-0704-000CN | Guide, cartridge, left lower | Internal components (1 of 6) on page 307 |
| RC2-0705-000CN | Lever, drive release | Internal components (1 of 6) on page 307 |
| RC2-0706-000CN | Lever, cartridge clamp | Internal components (1 of 6) on page 307 |
| RC2-0707-000CN | Stopper, cartridge, left | Internal components (1 of 6) on page 307 |
| RC2-0722-000CN | Cover, right-side (DIMM cover) | Covers on page 305 |
| RC2-0724-000CN | Paper clip tray | Covers on page 305 |
| RC2-0725-000CN | Tray, staple | Internal components (1 of 6) on page 307 |
| RC2-0726-000CN | Cover, fax | Covers on page 305 |
| RC2-0727-000CN | Cover (replaces the stapler door for devices without staplers) | Covers on page 305 |
| RC2-0729-000CN | Cover, fax internal (fax rail) | Covers on page 305 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RC2-0736-000CN | Plate, I/O | Internal components (1 of 6) on page 307 |
| RC2-0739-000CN | Cover, face-up-sensor cable | Internal components (5 of 6) on page 317 |
| RK2-0534-000CN | Microswitch | Internal components (6 of 6) on page 319 |
| RK2-1488-000CN | Motor, dc, 26.2 W | Internal components (2 of 6) on page 311 |
| RK2-1489-000CN | Motor, stepping | Internal components (2 of 6) on page 311 |
| RK2-1490-000CN | Solenoid, tray 1 | Internal components (5 of 6) on page 317 |
| RK2-1492-000CN | Solenoid | Internal components (6 of 6) on page 319 |
| RK2-1497-000CN | Fan, right-side | Internal components (5 of 6) on page 317 |
| RK2-1499-000CN | Fan, left-side | Internal components (1 of 6) on page 307 |
| RL1-0568-000CN | Roller, tray 1 pick-up | Internal components (3 of 6) on page 313 |
| RL1-1366-000CN | Cover, legal | Covers on page 305 |
| RL1-1370-000CN | Pickup roller, tray 2 | Tray 2 pickup assembly on page 321 |
| RL1-1723-000CN | Cover, right front | Covers on page 305 |
| RM1-1485-000CN | Roller stay assembly | Internal components (5 of 6) on page 317 |
| RM1-1490-000CN | Tray 1 assembly | Covers on page 305 |
| RM1-1497-000CN | Roller assembly, delivery | Internal components (6 of 6) on page 319 |
| RM1-1506-000CN | Position guide assembly | Internal components (4 of 6) on page 315 |
| RM1-1508-000CN | Transfer roller assembly | Internal components (3 of 6) on page 313 |
| RM1-1521-030CN | Laser/scanner assembly | Internal components (1 of 6) on page 307 |
| RM1-1522-000CN | Drive release assembly | Internal components (2 of 6) on page 311 |
| RM1-3712-000CN | Gear assembly | Internal components (5 of 6) on page 317 |
| RM1-3714-000CN | Pick-up roller gear assembly | Internal components (5 of 6) on page 317 |
| RM1-3715-000CN | Registration assembly | Internal components (3 of 6) on page 313 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RM1-3716-000CN | Tray 1 pickup roller assembly | Internal components (3 of 6) on page 313 |
| RM1-3722-000CN | Cartridge door assembly | Covers on page 305 |
| RM1-3723-000CN | Tray 1 cover assembly | Covers on page 305 |
| RM1-3724-000CN | Rear cover assembly | Covers on page 305 |
| RM1-3727-000CN | Roller assembly, bottom plate | Internal components (6 of 6) on page 319 |
| RM1-3740-000CN | Fuser, 110-127 V | Internal components (5 of 6) on page 317 |
| RM1-3741-000CN | Fuser, 220-240 V | Internal components (5 of 6) on page 317 |
| RM1-3742-000CN | Flag assembly, full detect | Covers on page 305 |
| RM1-3743-000CN | Flag assembly, face-down | Covers on page 305 |
| RM1-3746-000CN | Fixing drive side plate assembly | Internal components (2 of 6) on page 311 |
| RM1-3748-000CN | Pendulum assembly | Internal components (2 of 6) on page 311 |
| RM1-3749-000CN | Roller assembly, face-down | Internal components (6 of 6) on page 319 |
| RM1-3757-000CN | Transfer guide assembly, lower | Internal components (3 of 6) on page 313 |
| RM1-3758-000CN | High voltage power supply | Internal components (4 of 6) on page 315 |
| RM1-3759-000CN | Feed assembly, lower | Internal components (4 of 6) on page 315 |
| RM1-3760-000CN | Feed guide assembly | Internal components (4 of 6) on page 315 |
| RM1-3762-000CN | Tray 2 pickup assembly (also see Tray 2 pickup assembly on page 320) | Internal components (5 of 6) on page 317 |
| RM1-3762-000CN | Tray 2 pickup assembly | Tray 2 pickup assembly on page 321 |
| RM1-3763-000CN | Pickup roller assembly, tray 2 | Tray 2 pickup assembly on page 321 |
| RM1-3769-000CN | Sensor flag assembly, tray 2 | Tray 2 pickup assembly on page 321 |
| RM1-3772-000CN | Top cover assembly | Covers on page 305 |
| RM1-3773-000CN | Cover, left | Covers on page 305 |
| RM1-3774-000CN | ECU, 110-127 V (DC controller and low voltage power supply) | Internal components (5 of 6) on page 317 |
| RM1-3775-000CN | ECU, 220-240 V (DC controller and low voltage power supply) | Internal components (5 of 6) on page 317 |
| RM1-3790-000CN | Cover, stapler | Covers on page 305 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RM1-4040-000CN | Sensor PCA, top-of-page | Internal components (4 of 6) on page 315 |
| RM1-4041-000CN | Sensor PCA, multipurpose | Internal components (5 of 6) on page 317 |
| RM1-4042-000CN | Sensor PCA, width | Internal components (4 of 6) on page 315 |
| RM1-4053-000CN | Cable assembly | Internal components (1 of 6) on page 307 |
| RM1-4054-000CN | Cable, memory tag | Internal components (1 of 6) on page 307 |
| RM1-4057-000CN | Cable, delivery sensor | Internal components (3 of 6) on page 313 |
| RM1-4060-000CN | Cable, sensor, tray 2 | Tray 2 pickup assembly on page 321 |
| RM1-4062-000CN | Cable, option interface | Internal components (6 of 6) on page 319 |
| RU5-0366-000CN | Gear, 30T | Internal components (3 of 6) on page 313 |
| RU5-0394-000CN | Gear, 12T | Internal components (2 of 6) on page 311 |
| RU5-0400-000CN | Gear, 12T | Internal components (3 of 6) on page 313 |
| RU5-0409-000CN | Gear, 14T | Internal components (3 of 6) on page 313 |
| RU5-0950-000CN | Gear, 201t | Internal components (2 of 6) on page 311 |
| RU5-0951-000CN | Gear, 16T | Internal components (2 of 6) on page 311 |
| RU5-0955-000CN | Gear, 43T | Internal components (2 of 6) on page 311 |
| RU5-0956-000CN | Gear, 20T/20T | Internal components (2 of 6) on page 311 |
| RU5-0957-000CN | Gear, 20T | Internal components (2 of 6) on page 311 |
| RU5-0958-000CN | Gear, 17T/17T | Internal components (2 of 6) on page 311 |
| RU5-0959-000CN | Gear, 19T | Internal components (2 of 6) on page 311 |
| RU5-0960-000CN | Gear, 31T | Internal components (2 of 6) on page 311 |
| RU5-0962-000CN | Gear, 65T | Internal components (2 of 6) on page 311 |
| RU5-2385-000CN | Spring, compression | Internal components (3 of 6) on page 313 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| RU5-2386-000CN | Spring, torsion | Internal components (5 of 6) on page 317 |
| RU5-2388-000CN | Spring, tension | Covers on page 305 |
| RU5-2401-000CN | Spring, compression | Internal components (2 of 6) on page 311 |
| RU5-2403-000CN | Spring, tension | Internal components (1 of 6) on page 307 |
| RU5-2404-000CN | Spring, compression | Internal components (1 of 6) on page 307 |
| RU5-2405-000CN | Spring, compression | Internal components (1 of 6) on page 307 |
| RU5-2407-000CN | Spring, tension | Internal components (1 of 6) on page 307 |
| RU5-2408-000CN | Spring, compression | Internal components (3 of 6) on page 313 |
| RU5-2410-020CN | Spring, torsion | Internal components (1 of 6) on page 307 |
| RU5-2920-000CN | Spring, compression | Internal components (2 of 6) on page 311 |
| VS1-7177-003CN | Connector, snap-tight, black | Internal components (1 of 6) on page 307 |
| VS1-7177-004CN | Connector, snap-tight, black | Internal components (6 of 6) on page 319 |
| VS1-7257-007CN | Connector, drawer | Internal components (6 of 6) on page 319 |
| WG8-5624-000CN | Photo-interrupter | Internal components (6 of 6) on page 319 |
| WG8-5624-000CN | Photo-interrupter, tray 2 | Tray 2 pickup assembly on page 321 |
| WT2-5056-000CN | Clip, cable | Internal components (1 of 6) on page 307 |
| WT2-5056-000CN | Cable guide | Internal components (6 of 6) on page 319 |
| WT2-5678-000CN | Cable guide | Internal components (5 of 6) on page 317 |
| WT2-5678-000CN | Cable guide | Internal components (6 of 6) on page 319 |
| WT2-5694-000CN | Clip clamp, wire | Internal components (1 of 6) on page 307 |
| WT2-5694-000CN | Cable guide | Internal components (5 of 6) on page 317 |
| WT2-5812-000CN | Clip, cable | Internal components (1 of 6) on page 307 |

**Table 7-12 Numerical parts list (continued)**

| Part number | Description | Table and page |
|---|---|---|
| XA9-1500-000CN | Screw, RS, M3x8 | Internal components (2 of 6) on page 311 |
| XA9-1503-000CN | Screw, tapping, M3x6 | Internal components (5 of 6) on page 317 |
| XA9-1671-000CN | Screw, D, M3x8 | Internal components (1 of 6) on page 307 |
| XA9-1671-000CN | Screw, D, M3x8 | Internal components (2 of 6) on page 311 |
| XA9-1671-000CN | Screw, D, M3x8 | Internal components (3 of 6) on page 313 |
| XA9-1671-000CN | Screw, D, M3x8 | Internal components (5 of 6) on page 317 |
| XA9-1671-000CN | Screw, D, M3x8 | Internal components (6 of 6) on page 319 |
| XB2-7300-605CN | Screw w/washer, M3x6 | Internal components (4 of 6) on page 315 |
| XB2-7300-605CN | Screw w/washer, M3x6 | Internal components (5 of 6) on page 317 |
| XB4-7401-005CN | Screw, tapping, truss head, M4x10 | Internal components (3 of 6) on page 313 |
| XB4-7401-005CN | Screw, tapping, truss head, M4x10 | Internal components (4 of 6) on page 315 |
| XB4-7401-005CN | Screw, tapping, truss head, M4x10 | Internal components (5 of 6) on page 317 |
| XB4-7401-005CN | Screw, tapping, truss head, M4x10 | Internal components (6 of 6) on page 319 |
| XD2-1100-402CN | E-ring | Internal components (2 of 6) on page 311 |

# A Supplies and accessories

This section provides information about ordering parts, supplies, and accessories. Use only parts and accessories that are specifically designed for this device.


- Order parts, accessories, and supplies
- Part numbers

# Order parts, accessories, and supplies

Several methods are available for ordering parts, supplies, and accessories:

- Order directly from HP
- Order through service or support providers
- Order directly through the embedded Web server (for printers that are connected to a network)
- Order directly through the HP Easy Printer Care software

## Order directly from HP

You can obtain the following items directly from HP:

- **Replacement parts:** To order replacement parts in the U.S., go to http://www.hp.com/go/hpparts. Outside the United States, order parts by contacting your local authorized HP service center.
- **Supplies and accessories:** To order supplies in the U.S., go to http://www.hp.com/go/ljsupplies. To order supplies worldwide, go to http://www.hp.com/ghp/buyonline.html. To order accessories, go to www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp.

## Order through service or support providers

To order a part or accessory, contact an HP-authorized service or support provider.

## Order directly through the embedded Web server (for printers that are connected to a network)

Use the following steps to order printing supplies directly through the embedded Web server.

1. In the Web browser on the computer, type the IP address or host name of the device. The status window opens.
2. In the **Other links** area, double-click **Order Supplies**. This provides a URL for a site from which you can purchase consumables.
3. Select the part numbers that you want to order, and follow the instructions on the screen.

## Order directly through the HP Easy Printer Care software

HP Easy Printer Care software is a printer management tool designed to make printer configuration, monitoring, supplies ordering, troubleshooting, and updating as simple and efficient as possible. For more information about HP Easy Printer Care software, go to http://www.hp.com/go/easyprintercare.

# Part numbers

The following list of accessories was current at the time of printing. Ordering information and availability of the accessories might change during the life of the device.

## Paper-handling accessories

| Item | Description | Part number |
|---|---|---|
| Optional 500-sheet tray and feeder unit (tray 3) | Optional tray to increase paper capacity. Holds Letter, A4, Legal, A5, B5 (JIS), Executive, and 8.5 x 13 paper sizes. | Q7817–67901 |

## Print cartridge

| Item | Description | Part number |
|---|---|---|
| HP LaserJet print cartridge | 6,500-page cartridge | Q7551–67901 |
| | 13,000-page cartridge | Q7551–67902 |

## Memory

| Item | Description | Part number |
|---|---|---|
| 100-pin 133MHz DDR DIMM | 128 MB | Q7718-67901 |
| Boosts the ability of the device to handle large or complex print jobs. | 256 MB | Q7719-67901 |

## Cables and interfaces

| Item | Description | Part number |
|---|---|---|
| Enhanced I/O (EIO) cards<br><br>HP Jetdirect print server multi-protocol EIO network cards: | HP Jetdirect 620n Fast Ethernet (10/100Base-TX) print server | J7934-69011 |
| | HP Jetdirect 625n Gigabit Ethernet (10/100Base-TX) print server | J7960-61011 |
| | HP Jetdirect 680n 802.11b wireless internal print server | J6058-69006 |
| | HP bt1300 Bluetooth wireless printer adapter | J6072-69001 |
| | HP Jetdirect 635n IPv6/IPsec print server | J7961-69001 |
| USB cable | 2-meter A to B cable | C6518A |

| Item | Description | Part number |
|---|---|---|
| Power cords 3 meters | PWR-CORD 3-COND 1.9-M-LG ROHS United States/Canada 110v | 8120-5301 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Taiwan | 8121-0964 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Southern Europe/Western Europe/ Eastern Europe/Indonesia/Russia/ Baltics/Vietnam/Korea 220V | 8121-0950 or 8121-0731 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS China 220v | 8121-0945 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Phillipines/Singapore/Mexico/Brazil/ Thailand 220v | 8121-0952 |
| | PWR-CORD 3-COND 1.9-M-LG 5A ROHS United Kingdom/Middle East/ Phillipines/Singapore/Hong Kong SAR/ Malaysia 220v | 8121-0946 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Australia | 8121-0872 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Japan | 8121-0944 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Israel | 8121-1005 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Denmark | 8121-0949 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS South America 220v | 8121-0953 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS India, Africa | 8121-0954 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Mexico/Brazil 220v | 8121-0952 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Switzerland | 8121-0947 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Middle East 110v | 8121-5301 |
| | PWR-CORD 3-COND 1.9-M-LG ROHS Middle East 220V | 8121-0731 |

| Item | Description | Part number |
| --- | --- | --- |
| Fax phone cord 3 meters (9.8 feet) | PHN-CORD US 3.0-M-LG ROHS United States/Taiwan/China/Thailand/ Japan/Argentina/India/European Union/ South America/Indonesia/Malaysia/ MiddleEast/Phillipines/Singapore/ Mexico/Brazil/Canada/Russia/Bulgaria/ Baltics/Vietnam | 8121-0950 |
| | PHN-CORD KR 3.0-M-LG ROHS Korea | 8120-8908 |
| | PHN-CORD US 3.0-M-LG ROHS Hong Kong SAR | 8121-1042 |
| | PHN-CORD AU 3.0-M-LG ROHS Australia | 8120-8907 |
| | PHN-CORD IL 3.0-M-LG ROHS Israel | 8120-8913 |
| | PHN-CORD UK/HK/NZ 3.0-M-LG ROHS United Kingdom | 8120-8921 |
| | PHN-CORD DK 3.0-M-LG ROHS Denmark | 8120-8911 |
| | PHN-CORD EE 3.0-M-LG ROHS South Africa | 8120-8922 |
| | PHN-CORD DE 3.0-M-LG ROHS Denmark | 8120-8912 |
| | PHN-CORD NL 3.0-M-LG ROHS Netherlands | 8120-8915 |
| | PHN-CORD FR 3.0-M-LG ROHS France | 8120-8923 |
| | PHN-CORD IT 3.0-M-LG ROHS Southern Europe | 8120-8914 |
| | PHN-CORD CH 3.0-M-LG ROHS Switzerland | 8121-0844 |
| | PHN-CORD SE 3.0-M-LG ROHS NO/ FI/SV | 8120-8918 |
| | PHN-CORD OPT 510 NORWAY/ FINLAND 3.0M-LG | 8120-8916 |
| | PHN-CORD TR 3.0-M-LG ROHS Turkey/Greece | 8120-8920 |
| | PHN-CORD EE 3.0-M-LG ROHS SK/ SL/HR/RO/CS/HU/PL | 8120-8922 |

## Control-panel overlays

| Item | Description | Part number |
|---|---|---|
| Control-panel overlay | Kit-Control Pnl Overlay Left/Right EN | CB414-60102 |
| | Kit-Control Pnl Overlay Left/Right FR | CB414-60103 |
| | Kit-Control Pnl Overlay Left/Right IT | CB414-60104 |
| | Kit-Control Pnl Overlay Left/Right DE | CB414-60105 |
| | Kit-Control Pnl Overlay Left/Right ES | CB414-60106 |
| | Kit-Control Pnl Overlay Left/Right NL | CB414-60107 |
| | Kit-Control Pnl Overlay Left/Right PT | CB414-60108 |
| | Kit-Control Pnl Overlay Left/Right NO | CB414-60109 |
| | Kit-Control Pnl Overlay Left/Right SV | CB414-60110 |
| | Kit-Control Pnl Overlay Left/Right FI | CB414-60111 |
| | Kit-Control Pnl Overlay Left/Right DA | CB414-60112 |
| | Kit-Control Pnl Overlay Left/Right PL | CB414-60113 |
| | Kit-Control Pnl Overlay Left/Right RU | CB414-60114 |
| | Kit-Control Pnl Overlay Left/Right CS | CB414-60115 |
| | Kit-Control Pnl Overlay Left/Right HU | CB414-60116 |
| | Kit-Control Pnl Overlay Left/Right ZHTW | CB414-60117 |
| | Kit-Control Pnl Overlay Left/Right ZHCN | CB414-60118 |
| | Kit-Control Pnl Overlay Left/Right KO | CB414-60119 |
| | Kit-Control Pnl Overlay Left/Right JA | CB414-60120 |
| | Kit-Control Pnl Overlay Left/Right TR | CB414-60121 |
| | Kit-Control Pnl Overlay Left/Right HE | CB414-60122 |
| | Kit-Control Pnl Overlay Left/Right EL | CB414-60123 |
| | Kit-Control Pnl Overlay Left/Right AR | CB414-60124 |
| | Kit-Control Pnl Overlay Left/Right TH | CB414-60125 |
| | Kit-Control Pnl Overlay Left/Right HR | CB414-60151 |
| | Kit-Control Pnl Overlay Left/Right RO | CB414-60152 |
| | Kit-Control Pnl Overlay Left/Right SK | CB414-60153 |
| | Kit-Control Pnl Overlay Left/Right SL | CB414-60154 |

## Stapler accessories

| Item | Description | Part number |
|---|---|---|
| Staple cassette | Cassette that contains 1,500 unformed staples | Q7432–67901 |

## Print media

For more information about media supplies, go to http://www.hp.com/go/ljsupplies.

| Item | Description | Part number |
|---|---|---|
| HP Soft Gloss laser paper<br><br>For use with HP LaserJet devices. This is coated paper, good for business documents with high impact, such as brochures, sales material, and documents with graphics and photographic images.<br><br>Specifications: 32 lb (120 g/$m^2$). | Letter (220 x 280 mm), 50 sheets/box | C4179A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 50 sheets/box | C4179B/Asia-Pacific countries/regions and Europe |
| HP LaserJet tough paper<br><br>For use with HP LaserJet devices. This satin-finish paper is waterproof and tear-proof, yet doesn't compromise on print quality or performance. Use it for signs, maps, menus, and other business applications. | Letter (8.5 x 11 in), 50 sheets to a carton | Q1298A/North America |
| | A4 (210 x 297 mm), 50 sheets to a carton | Q1298B/Asia-Pacific countries/regions and Europe |
| HP Premium Choice LaserJet paper<br><br>HP's brightest LaserJet paper. Expect spectacular color and crisp black from this paper that is extra smooth and brilliantly white. This is ideal for presentations, business plans, external correspondence and other high-value documents<br><br>Specifications: 98 bright, 32 lb. (75 g/$m^2$). | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton | HPU1132/North America |
| | Letter (8.5 x 11 in), 250 sheets/ream, 6-ream carton | HPU1732 North America |
| | A4 (210 x 297 mm), 5-ream carton | Q2397A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 250 sheet/ream, 5-ream carton | CHP412/Europe |
| | A4 (210 x 297 mm), 500 sheet/ream, 5-ream carton | CHP410/Europe |
| | A4 (210 x 297 mm), 160 g/$m^2$, 500 sheet/ream, 5-ream carton | CHP413/Europe |
| HP LaserJet paper<br><br>For use with HP LaserJet devices. This is good for letterhead, high-value memos, legal documents, direct mail, and correspondence.<br><br>Specifications: 96 bright, 24 lb (90 g/$m^2$). | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton | HPJ1124/North America |
| | Legal (8.5 x 14 in), 500 sheets/ream, 10-ream carton | HPJ1424/North America |
| | Letter (220 x 280 mm), 500 sheets/ream, 5-ream carton | Q2398A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton | Q2400A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 500 sheets/ream | CHP310/Europe |

| Item | Description | Part number |
|---|---|---|
| HP Printing paper<br><br>For use with HP LaserJet and inkjet devices. This has been created especially for small and home offices. It is heavier and brighter than copier paper.<br><br>Specifications: 92 bright, 22 lb. | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton | HPP1122/North America and Mexico |
| | Letter (8.5 x 11 in), 500 sheets/ream, 3-ream carton | HPP113R/North America |
| | A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton | CHP210/Europe |
| | A4 (210 x 297 mm), 300 sheets/ream, 5-ream carton | CHP213/Europe |
| HP Multipurpose paper<br><br>For use with all office equipment-laser and inkjet devices, copiers, and fax machines. This has been created for businesses that want one paper for all their office needs. It is brighter and smoother than other office papers.<br><br>Specifications: 90 bright, 20 lb (75 g/m$^2$). | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton<br><br>Letter (8.5 x 11 in), 500 sheets/ream, 5-ream carton<br><br>Letter (8.5 x 11 in), 250 sheets/ream, 12-ream carton<br><br>Letter (8.5 x 11 in), 3-hole, 500 sheets/ream, 10-ream carton<br><br>Legal (8.5 x 14 in), 500 sheets/ream, 10-ream carton | HPM1120/North America<br><br>HPM115R/North America<br><br>HP25011/North America<br><br>HPM113H/North America<br><br>HPM1420/North America |
| HP Office paper<br><br>For use with all office equipment-laser and inkjet devices, copiers, and fax machines. This is good for high-volume printing.<br><br>Specifications: 84 bright, 20 lb (75 g/m$^2$). | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton | HPC8511/North America and Mexico |
| | Letter (8.5 x 11 in), 3-hole, 500 sheets/ream, 10-ream carton | HPC3HP/North America |
| | Legal (8.5 x 14 in), 500 sheets/ream, 10-ream carton | HPC8514/North America |
| | Letter (8.5 x 11 in), Quick Pack; 2,500-sheet carton | HP2500S/North America and Mexico |
| | Letter (8.5 x 11 in), Quick Pack 3-hole; 2,500-sheet carton | HP2500P/North America |
| | Letter (220 x 280 mm), 500 sheets/ream, 5-ream carton | Q2408A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton | Q2407A/Asia-Pacific countries/regions |
| | A4 (210 x 297 mm), 500 sheets/ream, 5-ream carton | CHP110/Europe |
| | A4 (210 x 297 mm), Quick Pack; 2500 sheets/ream, 5-ream carton | CHP113/Europe |

| Item | Description | Part number |
| --- | --- | --- |
| HP Office recycled paper<br><br>For use with all office equipment-laser and inkjet printers, copiers, and fax machines. This is good for high-volume printing.<br><br>Satisfies U.S. Executive Order 13101 for environmentally preferable products.<br><br>Specifications: 84 bright, 20 lb, 30% post-consumer content. | Letter (8.5 x 11 in), 500 sheets/ream, 10-ream carton | HPE1120/North America |
| | Letter (8.5 x 11 in), 3-hole, 500 sheets/ream, 10-ream carton | HPE113H/North America |
| | Legal (8.5 x 14 in), 500 sheets/ream, 10-ream carton | HPE1420/North America |
| HP LaserJet transparencies<br><br>For use only with HP LaserJet monochrome printers. For crisp, sharp text and graphics, rely on the only transparencies specifically designed and tested to work with monochrome HP LaserJet printers.<br><br>Specifications: 4.3-mil thickness. | Letter (8.5 x 11 in), 50 sheets to a carton | 92296T/North America, Asia-Pacific countries/regions, and Europe |
| | A4 (210 x 297 mm), 50 sheets to a carton | 922296U/Asia-Pacific countries/regions and Europe |

# B Service and support

## Hewlett-Packard limited warranty statement

| HP PRODUCT | DURATION OF LIMITED WARRANTY |
| --- | --- |
| HP LaserJet M3027, M3027x, M3035, and M3035xs | One-year on-site warranty |

HP warrants to you, the end-user customer, that HP hardware and accessories will be free from defects in materials and workmanship after the date of purchase, for the period specified above. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.

HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for the period specified above, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the warranty period, HP will replace software which does not execute its programming instructions due to such defects.

HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.

HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries/regions, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country/region to country/region, state to state, or province to province. HP's limited warranty is valid in any country/region or locality where HP has a support presence for this product and where HP has marketed this product. The level of warranty service you receive may vary according to local standards. HP will not alter form, fit or function of the product to make it operate in a country/region for which it was never intended to function for legal or regulatory reasons.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL,

CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries/regions, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

# Customer self repair warranty service

HP products are designed with many Customer Self Repair (CSR) parts to minimize repair time and allow for greater flexibility in performing defective parts replacement. If during the diagnosis period, HP identifies that the repair can be accomplished by the use of a CSR part, HP will ship that part directly to you for replacement. There are two categories of CSR parts: 1) Parts for which customer self repair is mandatory. If you request HP to replace these parts, you will be charged for the travel and labor costs of this service. 2) Parts for which customer self repair is optional. These parts are also designed for Customer Self Repair. If, however, you require that HP replace them for you, this may be done at no additional charge under the type of warranty service designated for your product.

Based on availability and where geography permits, CSR parts will be shipped for next business day delivery. Same-day or four-hour delivery may be offered at an additional charge where geography permits. If assistance is required, you can call the HP Technical Support Center and a technician will help you over the phone. HP specifies in the materials shipped with a replacement CSR part whether a defective part must be returned to HP. In cases where it is required to return the defective part to HP, you must ship the defective part back to HP within a defined period of time, normally five (5) business days. The defective part must be returned with the associated documentation in the provided shipping material. Failure to return the defective part may result in HP billing you for the replacement. With a customer self repair, HP will pay all shipping and part return costs and determine the courier/carrier to be used.

# Print cartridge limited warranty statement

This HP product is warranted to be free from defects in materials and workmanship.

This warranty does not apply to products that (a) have been refilled, refurbished, remanufactured or tampered with in any way, (b) experience problems resulting from misuse, improper storage, or operation outside of the published environmental specifications for the device product or (c) exhibit wear from ordinary use.

To obtain warranty service, please return the product to place of purchase (with a written description of the problem and print samples) or contact HP customer support. At HP's option, HP will either replace products that prove to be defective or refund your purchase price.

TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTY IS EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE.

TO THE EXTENT ALLOWED BY LOCAL LAW, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION

TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

# HP Customer Care

## Online Services

For 24-hour access to updated HP device-specific software, product information, and support information through an Internet connection, go to the Web site: www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp.

Go to www.hp.com/support/net_printing for information about the HP Jetdirect external print server.

HP Instant Support Professional Edition (ISPE) is a suite of Web-based troubleshooting tools for desktop computing and printing products. Go to instantsupport.hp.com.

## Telephone support

HP provides free telephone support during the warranty period. For the telephone number for your country/region, see the flyer that shipped with the device, or visit www.hp.com/support/. Before calling HP, have the following information ready: the product name and serial number, the date of purchase, and a description of the problem.

## Software utilities, drivers, and electronic information

www.hp.com/go/LJM3027mfp_software or www.hp.com/go/LJM3035mfp_software

The Web page for the drivers is in English, but you can download the drivers themselves in several languages.

## HP direct ordering for accessories or supplies

- United States: www.hp.com/sbso/product/supplies.
- Canada: www.hp.ca/catalog/supplies
- Europe: www.hp.com/supplies
- Asia-Pacific: www.hp.com/paper/

To order genuine HP parts or accessories, go to the HP Parts Store at www.hp.com/buy/parts (U.S. and Canada only), or call 1-800-538-8787 (U.S.) or 1-800-387-3154 (Canada).

## HP service information

To locate HP-Authorized Dealers, call 1-800-243-9816 (U.S.) or 1-800-387-3867 (Canada).

Outside the United States and Canada, call the customer support number for your country/region. See the flyer that shipped in the box with the device.

## HP service agreements

Call 1-800-HPINVENT (1-800-474-6836 (U.S.)) or 1-800-268-1221 (Canada). Or, go to the HP SupportPack and Carepaq™ Services Web site at www.hpexpress-services.com/10467a.

For extended service, call 1-800-446-0522.

## HP Easy Printer Care software

To check the device status and settings and view troubleshooting information and online documentation, use the HP Easy Printer Care software. You must have performed a full software installation in order to use the HP Easy Printer Care software. See Use the embedded Web server on page 53.

## HP support and information for Macintosh computers

Go to www.hp.com/go/macosx for Macintosh OS X support information and HP subscription service for driver updates.

Go to www.hp.com/go/mac-connect for products that are designed specifically for the Macintosh user.

# HP maintenance agreements

HP has several types of maintenance agreements that meet a wide range of support needs. Maintenance agreements are not part of the standard warranty. Support services may vary by area. Check with your local HP dealer to determine the services available to you.

## On-site service agreements

To provide you with the level of support best suited to your needs, HP has on-site service agreements with a selection of response times.

### Next-day on-site service

This agreement provides support by the next working day following a service request. Extended coverage hours and extended travel beyond HP's designated service zones are available on most on-site agreements (for additional charges).

### Weekly (volume) on-site service

This agreement provides scheduled weekly on-site visits for organizations with many HP products. This agreement is designated for sites using 25 or more workstation products, including devices, plotters, computers, and disk drives.

## Repacking the device

If HP Customer Care determines that your device needs to be returned to HP for repair, follow the steps below to repack the device before shipping it.

△ **CAUTION:** Shipping damage as a result of inadequate packing is the customer's responsibility.

#### To repack the device

1. Remove and retain any DIMMs cards that you have purchased and installed in the device. Do not remove the DIMM that came with the device.

   △ **CAUTION:** Static electricity can damage DIMMs. When handling DIMMs, either wear an antistatic wrist strap, or frequently touch the surface of the DIMM antistatic package and then touch bare metal on the device. To remove the DIMMs, see Install memory on page 31.

2. Remove and retain the print cartridge.

   △ **CAUTION:** It is *extremely important* to remove the print cartridge before shipping the device. A print cartridge that remains in the device during shipping will leak and entirely cover the device engine and other parts with toner.

   To prevent damage to the print cartridge, avoid touching the roller on it, and store the print cartridge in its original packing material or so that it is not exposed to light.

3. Remove and retain the power cable, interface cable, and optional accessories.

4. If possible, include print samples and 50 to 100 sheets of paper or other print media that did not print correctly.

5. In the U.S., call HP Customer Care to request new packing material. In other areas, use the original packing material, if possible. Hewlett-Packard recommends insuring the equipment for shipment.

## Extended warranty

HP Support provides coverage for the HP hardware product and all HP-supplied internal components. The hardware maintenance covers a 1- to 3-year period from date of the HP product purchase. The customer must purchase HP Support within the stated factory warranty. For more information, contact the HP Customer Care Service and Support group.

# C Specifications


- Physical specifications
- Electrical specifications
- Acoustic emissions
- Operating environment

# Physical specifications

**Table C-1 Product dimensions**

| Model | Height | Depth | Width | Weight |
|---|---|---|---|---|
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP with legal-size scanner and ADF | 550 mm (21.6 inches) | 510 mm (20.1 inches) | 525 mm (20.7 inches) | 28.8 kg (63.5 lb) |
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP with letter/A4-size scanner and ADF | 530 mm (20.9 inches) | 485 mm (19.1 inches) | 464 mm (18.3 inches) | 27.6 kg (60.6 lb) |
| HP LaserJet M3035xs MFP with legal-size scanner and ADF | 688 mm (27.1 inches) | 510 mm (20.1 inches) | 525 mm (20.7 inches) | 34.6 kg (76.4 lb) |
| HP LaserJet M3035xs MFP with letter/A4-size scanner and ADF | 670 mm (26.4 inches) | 485 mm (19.1 inches) | 464 mm (18.3 inches) | 33.4 kg (73.5 lb) |

**Table C-2 Product dimensions with all doors and trays fully opened**

| Model | Height | Depth | Width |
|---|---|---|---|
| HP LaserJet M3027 MFP, M3027x MFP, and M3035 MFP | 870 mm (34.3 inches) | 978 mm (38.4 inches) | 634 mm (25 inches) |
| HP LaserJet M3035xs MFP | 1010 mm (39.8 inches) | 978 mm (38.4 inches) | 634 mm (25 inches) |

# Electrical specifications

⚠ **WARNING!** Power requirements are based on the country/region where the device is sold. Do not convert operating voltages. This can damage the device and void the product warranty.

**Table C-3 Power requirements**

| Specification | 110-volt models | 220-volt models |
|---|---|---|
| Power requirements | 100 to 127 volts (± 10%)<br>50/60 Hz (± 2 Hz) | 220 to 240 volts (± 10%)<br>50/60 Hz (± 2 Hz) |
| Rated current | 7.5 Amps | 4.5 Amps |

**Table C-4 Power consumption (average, in watts)[1]**

| Printer model | Printing[2] | Ready[3],[4] | Sleep[5] | Off |
|---|---|---|---|---|
| HP LaserJet M3027 | 625 W[6] | 11 W | 8.5 W | 0.4 W |
| HP LaserJet M3027x | 625 W[6] | 11 W | 8.5 W | 0.4 W |

**Table C-4 Power consumption (average, in watts) (continued)**

| Printer model | Printing[2] | Ready[3],[4] | Sleep[5] | Off |
|---|---|---|---|---|
| HP LaserJet M3035 | 625 W[6] | 11 W | 8.5 W | 0.4 W |
| HP LaserJet M3035xs | 625 W[6] | 11 W | 8.5 W | 0.4 W |

1 Values subject to change. See www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp for current information.

2 Power numbers are the highest values measured using all standard voltages.

3 Default time from Ready mode to Sleep = 30 minutes.

4 Heat dissipation in Ready mode = 37.5 BTU/hour.

5 Recovery time from Sleep to start of printing = less than 8.5 seconds.

6 Print speed is 27 or 35 ppm.

# Acoustic emissions

**Table C-5 Sound power and pressure level[1],[2]**

| Sound power level | Declared per ISO 9296 |
|---|---|
| Printing[3] | $L_{WAd}$= 6.5 Bels (A) [65 dB(A)] |
| Ready | Essentially Inaudible |
| **Sound pressure level** | **Declared per ISO 9296** |
| Printing[3] | $L_{pAm}$=56 dB (A) |
| Ready | Essentially Inaudible |

1 Values subject to change. See www.hp.com/support/LJM3027mfp or www.hp.com/support/LJM3035mfp for current information.

2 Configuration tested: base printer, simplex printing with A4 paper size.

3 Print speed is 27 or 35 ppm.

# Operating environment

**Table C-6 Necessary conditions**

| Environmental condition | Printing | Storage/standby |
|---|---|---|
| Temperature (printer and print cartridge) | 17.5° to 25.5°C (63° to 77°F) | 0° to 40°C (32° to 104°F) |
| Relative humidity | 30% to 70% (non-condensing) | 0% to 95% |

# D Regulatory information

This section contains the following regulatory information:


- FCC regulations
- Environmental product stewardship program
- Telecom statement
- Declaration of conformity
- Safety statements

# FCC regulations

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If this equipment is not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase separation between equipment and receiver.
- Connect equipment to an outlet on a circuit different from that to which the receiver is located.
- Consult your dealer or an experienced radio/TV technician.

**NOTE:** Any changes or modifications to the printer that are not expressly approved by HP could void the user's authority to operate this equipment.

Use of a shielded interface cable is required to comply with the Class B limits of Part 15 of FCC rules.

# Environmental product stewardship program

## Protecting the environment

Hewlett-Packard Company is committed to providing quality products in an environmentally sound manner. This product has been designed with several attributes to minimize impacts on our environment.

## Ozone production

This product generates no appreciable ozone gas ($O_3$).

## Power consumption

Power usage drops significantly while in Ready and Sleep modes, which saves natural resources and saves money without affecting the high performance of this product. This product qualifies for ENERGY STAR® (Version 3.0), which is a voluntary program to encourage the development of energy-efficient office products.

ENERGY STAR® and the ENERGY STAR mark are U.S. registered marks. As an ENERGY STAR partner, Hewlett-Packard Company has determined that this product meets ENERGY STAR Guidelines for energy efficiency. For more information, see www.energystar.gov.

## Toner consumption

Economode uses significantly less toner, which might extend the life of the print cartridge.

## Paper use

This device's manual/optional automatic duplex feature (two-sided printing) and N-up printing (multiple pages printed on one page) capability can reduce paper usage and the resulting demands on natural resources.

## Plastics

Plastic parts over 25 grams are marked according to international standards that enhance the ability to identify plastics for recycling purposes at the end of the product's life.

## HP LaserJet print supplies

It's easy to return and recycle your empty HP LaserJet print cartridges—free of charge—with HP Planet Partners. HP is committed to providing inventive, high-quality products and services that are environmentally sound, from product design and manufacturing to distribution, operation and recycling processes. We ensure your returned HP LaserJet print cartridges are recycled properly, processing them to recover valuable plastics and metals for new products and diverting millions of tons of waste from landfills. Since this cartridge is being recycled and used in new materials, it will

not be returned to you. Your empty HP LaserJet print cartridges are recycled responsibly when you participate in the HP Planet Partners program. Thank you for being environmentally responsible!

In many countries/regions, this product's printing supplies (for example, print cartridges) can be returned to HP through the HP Printing Supplies Returns and Recycling Program. An easy-to-use and free take back program is available in more than 35 countries/regions. Multilingual program information and instructions are included in every new HP LaserJet print cartridge and supplies package.

## HP print supplies returns and recycling program information

Since 1992, HP has offered HP LaserJet supplies return and recycling free of charge. In 2004, HP Planet Partners for LaserJet Supplies was available in 85% of the world market where HP LaserJet supplies are sold. Postage-paid and pre-addressed labels are included within the instruction guide in most HP LaserJet print cartridge boxes. Labels and bulk boxes are also available through the Web site: www.hp.com/recycle.

Use the label to return empty, original HP LaserJet print cartridges only. Please do not use this label for non-HP cartridges, refilled or remanufactured cartridges, or warranty returns. Printing supplies or other objects inadvertently sent to the HP Planet Partners program cannot be returned.

More than 10 million HP LaserJet print cartridges were recycled globally in 2004 through the HP Planet Partners supplies recycling program. This record number represents 26 million pounds of print cartridge materials diverted from landfills. Worldwide, in 2004, HP recycled an average of 59% of the print cartridge by weight consisting primarily of plastic and metals. Plastics and metals are used to make new products such as HP products, plastic trays, and spools. The remaining materials are disposed of in an environmentally responsible manner.

- **U.S. returns.** For a more environmentally responsible return of used cartridges and supplies, HP encourages the use of bulk returns. Simply bundle two or more cartridges together and use the single, pre-paid, pre-addressed UPS label that is supplied in the package. For more information in the U.S., call 1-800-340-2445 or visit the HP Web site at www.hp.com/recycle.
- **Non-U.S. returns.** Non-U.S. customers should visit the www.hp.com/recycle Web site for further information regarding availability of the HP Supplies Returns and Recycling Program.

## Paper

This product is capable of using recycled papers when the paper meets the guidelines outlined in the *HP LaserJet Printer Family Print Media Guide*. This product is suitable for the use of recycled paper according to EN12281:2002.

## Material restrictions

This HP product does not contain added mercury.

This HP product contains a battery that might require special handling at end-of-life. The batteries contained in or supplied by Hewlett-Packard for this product include the following:

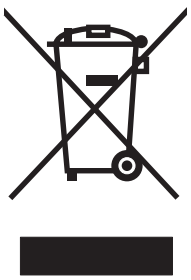
| HP LaserJet M3027/M3035 device | |
|---|---|
| Type | Carbon monofluoride lithium battery BR1632 |
| Weight | 1.5 g |

| HP LaserJet M3027/M3035 device | |
|---|---|
| Location | On formatter board |
| User-removable | No |

廢電池請回收

For recycling information, you can go to www.hp.com/recycle, or contact your local authorities or the Electronics Industries Alliance: www.eiae.org.

## Disposal of waste equipment by users in private households in the European Union



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

## Material Safety Data Sheet (MSDS)

Material Safety Data Sheets (MSDS) for supplies containing chemical substances (for example, toner) can be obtained by contacting the HP Web site at www.hp.com/go/msds or www.hp.com/hpinfo/community/environment/productinfo/safety.

## For more information

To obtain information about these environmental topics:

- Product environmental profile sheet for this and many related HP products
- HP's commitment to the environment
- HP's environmental management system
- HP's end-of-life product return and recycling program
- Material Safety Data Sheets

Visit www.hp.com/go/environment or www.hp.com/hpinfo/globalcitizenship/environment.

# Telecom statement

The HP LaserJet M3027x and HP LaserJet M3035xs models have the HP LaserJet Analog Fax Accessory 300 already installed to provide communication to the public switch telephone network (PSTN) for fax functionality. See the *HP LaserJet Analog Fax Accessory 300 User Guide* for all regulatory approval information and regulatory notices associated with the fax functionality and that device.

# Declaration of conformity

**Declaration of Conformity**
according to ISO/IEC Guide 22 and EN 45014

| | |
|---|---|
| **Manufacturer's Name:** | Hewlett-Packard Company |
| **Manufacturer's Address:** | 11311 Chinden Boulevard,<br>Boise, Idaho 83714-1021, USA |
| **declares, that the product** | |
| **Product Name:** | HP LaserJet M3027 / M3035 Series |
| **Accessories[5]:** | Q7817A – Optional 1x500 Sheet Tray<br>BOISB-0308-00 – Fax module |
| **Regulatory Model Number[3]:** | BOISB-0406-01 |
| **Product Options:** | ALL |
| **Print Cartridge:** | Q7551A, Q7551X |

**conforms to the following Product Specifications:**

| | |
|---|---|
| Safety: | IEC 60950-1:2001 / EN60950-1: 2001 +A11<br>IEC 60825-1:1993 +A1 +A2 / EN 60825-1:1994 +A1 +A2 (Class 1 Laser/LED Product)<br>GB4943-2001 |
| EMC: | CISPR 22:1993 +A1 +A2 / EN 55022:1994 +A1 +A2 - Class A[1,4]<br>EN 61000-3-2:2000<br>EN 61000-3-3:1995 +A1<br>EN 55024:1998 +A1 +A2<br>FCC Title 47 CFR, Part 15 Class A[2] / ICES-003, Issue 4 |
| TELECOM: | TBR-21:1998; EG 201 121:1998 |

**Supplementary Information:**

The product herewith complies with the requirements of the EMC Directive 89/336/EEC, the Low Voltage Directive 73/23/EEC, the R&TTE Directive 1999/5/EC (Annex II), and carries the CE-Marking accordingly.

1) The product was tested in a typical configuration with Hewlett-Packard Personal Computer Systems.

2) This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

3) For regulatory purposes, this product is assigned a Regulatory model number. This number should not be confused with the marketing name or the product number(s).

4) The product meets the requirements of EN55022 & CNS13438 Class A in which case the following applies: “Warning – This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures”.

5) All worldwide modular approvals for analog fax accessory obtained by Hewlett-Packard under the regulatory model number BOISB-0308-00 incorporate the Multi-Tech Systems MT5634SMI Socket Modem Module.

Boise, Idaho , USA

**19 April, 2006**

**For regulatory topics only:**

| | |
|---|---|
| Australia Contact: | Product Regulations Manager, Hewlett-Packard Australia Ltd., 31-41 Joseph Street, Blackburn, Victoria 3130, Australia |
| European Contact: | Your Local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department HQ-TRE / Standards Europe, Herrenberger Strasse 140, , D-71034, Böblingen, (FAX: +49-7031-14-3143) |
| USA Contact: | Product Regulations Manager, Hewlett-Packard Company,, PO Box 15, Mail Stop 160, Boise, ID 83707-0015, , (Phone: 208-396-6000) |

# Safety statements

## Laser safety

The Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration has implemented regulations for laser products manufactured since August 1, 1976. Compliance is mandatory for products marketed in the United States. The device is certified as a “Class 1” laser product under the U.S. Department of Health and Human Services (DHHS) Radiation Performance Standard according to the Radiation Control for Health and Safety Act of 1968. Since radiation emitted inside the device is completely confined within protective housings and external covers, the laser beam cannot escape during any phase of normal user operation.

⚠ **WARNING!** Using controls, making adjustments, or performing procedures other than those specified in this user guide may result in exposure to hazardous radiation.

## Canadian DOC regulations

Complies with Canadian EMC Class B requirements.

« Conforme à la classe B des normes canadiennes de compatibilité électromagnétiques. « CEM ». »

## VCCI statement (Japan)

この装置は、情報処理装置等電波障害自主規制協議会（ＶＣＣＩ）の基準に基づくクラスＡ情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

## Power cord statement (Japan)

製品には、同梱された電源コードをお使い下さい。
同梱された電源コードは、他の製品では使用出来ません。

## EMI statement (Korea)

사용시 안내문 (A급 기기)

이 기기는 업무용으로 전자파장해검정을 받은 기기이오니, 만약 잘못 구입하셨을 때에는 구입한 곳에서 비업무용으로 교환하시기 바랍니다.

## EMI statement (Taiwan)

警告使用者：

這是甲類的資訊產品，在居住的環境中使用時，可能會造成射頻干擾，在這種情況下，使用者會被要求採取某些適當的對策。

## Laser statement for Finland

**Luokan 1 laserlaite**

Klass 1 Laser Apparat

HP LaserJet M3027, M3027x, M3035, M3035xs, laserkirjoitin on käyttäjän kannalta turvallinen luokan 1 laserlaite. Normaalissa käytössä kirjoittimen suojakotelointi estää lasersäteen pääsyn laitteen ulkopuolelle. Laitteen turvallisuusluokka on määritetty standardin EN 60825-1 (1994) mukaisesti.

**VAROITUS !**

Laitteen käyttäminen muulla kuin käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

**VARNING !**

Om apparaten används på annat sätt än i bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

**HUOLTO**

HP LaserJet M3027, M3027x, M3035, M3035xs - kirjoittimen sisällä ei ole käyttäjän huollettavissa olevia kohteita. Laitteen saa avata ja huoltaa ainoastaan sen huoltamiseen koulutettu henkilö. Tällaiseksi huoltotoimenpiteeksi ei katsota väriainekasetin vaihtamista, paperiradan puhdistusta tai muita käyttäjän käsikirjassa lueteltuja, käyttäjän tehtäväksi tarkoitettuja ylläpitotoimia, jotka voidaan suorittaa ilman erikoistyökaluja.

**VARO !**

Mikäli kirjoittimen suojakotelo avataan, olet alttiina näkymättömällelasersäteilylle laitteen ollessa toiminnassa. Älä katso säteeseen.

**VARNING !**

Om laserprinterns skyddshölje öppnas då apparaten är i funktion, utsättas användaren för osynlig laserstrålning. Betrakta ej strålen. Tiedot laitteessa käytettävän laserdiodin säteilyominaisuuksista: Aallonpituus 775-795 nm Teho 5 m W Luokan 3B laser.

# E Working with memory and print server cards

One dual inline memory module (DIMM) slot is available for upgrading the device with the following items:

- More memory—DIMMs are available in 64, 128, 256, and 512 MB.
- Other DIMM-based printer languages and printer options.

The device uses 100-pin 133 MHz DDR memory modules. Extended data output (EDO) DIMMs are not supported.

For ordering information, see Order parts, accessories, and supplies on page 344.

**NOTE:** Single inline memory modules (SIMMs) used in previous HP LaserJet printers are not compatible with the device.

The device also has one EIO slot for expanding the device networking capabilities. The EIO slot can be used to upgrade the device with an additional network connection, such as a wireless print server, network card, or a connectivity card for a serial or AppleTalk connection.

To find out how much memory is installed in the device, or to find out what is installed in the EIO slots, print a configuration page. See Use information pages on page 49.

**NOTE:** If memory problems occur when you are printing complex graphics, you can make more memory available by removing downloaded fonts, style sheets, and macros from device memory. Reducing the complexity of a print job from within a program can help avoid memory problems.

# Glossary

**bidirectional communication** Two-way data transmission.

**bin** A receptacle for holding printed pages.

**BOOTP** Abbreviation for “Bootstrap Protocol,” an Internet protocol that a computer uses to find its IP address.

**calibration** The process in which the printer makes internal adjustments to produce the best print quality.

**chooser** A Macintosh accessory that you use to select a device.

**control panel** The area on the printer that contains buttons and a display screen. Use the control panel to set printer settings and to get information about the printer status.

**default** The normal or standard setting for hardware or software.

**DHCP** Abbreviation for “dynamic host configuration protocol.” Individual computers or peripherals that are connected to a network use DHCP to find their own configuration information, including the IP address.

**DIMM** Abbreviation for “dual inline memory module.” A small circuit board that holds memory chips.

**duplex** A feature that accommodates printing on both sides of a sheet of paper. Also called “two-sided printing.”

**EIO** Abbreviation for “enhanced input/output.” A hardware interface that is used to add a print server, network adaptor, hard disk, or other plug-in item for HP printers.

**Emulated PostScript** Software that emulates Adobe PostScript, a programming language that describes the appearance of the printed page. This printer language appears as “PS” in many menus.

**firmware** Programming instructions that are stored in a read-only memory unit inside the printer.

**font** A complete set of letters, numerals, and symbols in a typeface.

**fuser** The assembly that uses heat to fuse the toner onto the print media.

**grayscale** Various shades of gray.

**halftone pattern** A halftone pattern uses differing sizes of ink dots to produce a continuous-tone image such as a photograph.

**HP Easy Printer Care software** Software that provides the ability to track and maintain printers from your computer desktop.

**HP Jetdirect** An HP product for network printing.

**HP Web Jetadmin** An HP-trademarked Web-based printer control software that you can use on a computer to manage any peripheral that is connected to an HP Jetdirect print server.

**I/O** Abbreviation for “input/output,” refers to computer-port settings.

**IP address** The unique number assigned to a computer device that is connected to a network.

**IPX/SPX** Abbreviation for “internetwork packet exchange/sequenced packet exchange.”

**media** The paper, labels, transparencies, or other material on which the printer prints the image.

**memory tag** A memory partition that has a specific address.

**monochrome** Black and white. Devoid of color.

**network** A system of computers interconnected by telephone wires or other means in order to share information.

**network administrator** A person who manages a network.

**page buffer** Temporary printer memory used to hold page data while the printer creates an image of the page.

**PCL** Abbreviation for “Printer Control Language.”

**peripheral** An auxiliary device, such as a printer, modem, or storage system, that works in conjunction with a computer.

**personality** Distinctive features or characteristics of a printer or printer language.

**pixel** Abbreviation for “picture element,” the smallest unit of area in an image displayed on a screen.

**PJL** Abbreviation for “printer job language.”

**PostScript** A trademarked page-description language.

**PPD** Abbreviation for “PostScript printer description.”

**printer driver** A software program that a computer uses to gain access to printer features.

**RAM** Abbreviation for “random access memory,” a type of computer memory that stores data that can change.

**raster image** An image composed of dots.

**render** The process of producing text or graphics.

**ROM** Abbreviation for “read-only memory,” a type of computer memory that stores data that should not change.

**supplies** Materials that the printer uses and that must be replaced. The supply item for this printer is the print cartridge.

**TCP/IP** An internet protocol that has become the global standard for communications.

**toner** The fine black or colored powder that forms the image on the printed media.

**transfer unit** The black plastic belt that transports media inside the printer and transfers toner from the print cartridge onto the media.

**tray** The receptacle that holds blank media.

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